DOCUMENT RESUME

ED 418 985 TM 028 264

AUTHOR Gilford, Dorothy M.
TITLE Measures of Inservice Professional Development: Suggested Items for the 1998-1999 Schools and Staffing Survey. Working Paper Series.
INSTITUTION National Center for Education Statistics (ED), Washington, DC.
REPORT NO NCES-WP-96-25
PUB DATE 1996-10-00
NOTE 61p.
AVAILABLE FROM U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, 555 New Jersey Avenue, N.W., Room 400, Washington, DC 20208-5652.
PUB TYPE Reports - Evaluative (142)
EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS *Computer Uses in Education; Educational Change; Elementary Secondary Education; *Inservice Teacher Education; International Education; International Studies; *Measurement Techniques; National Surveys; *Professional Development; *Research Design; Teacher Characteristics; Teacher Improvement
IDENTIFIERS *Schools and Staffing Survey (NCES)

ABSTRACT

As the National Center for Education Statistics (NCES) considers the redesign of the Schools and Staffing Survey (SASS), it is appropriate to consider the information about inservice professional development (IPD) that would be suitable for inclusion in the SASS. Part I of this paper considers the various definitions of IPD and its evaluation, reflected in the many types of IPD programs encompassed. When considering the design of SASS items, it is noted that the large number of types of IPD programs calls for a framework to organize information collection and compilation. Because data from the 1998-99 SASS will become available in the year 2000, national and state reform initiatives that focus on that year are discussed. A set of reform oriented approaches for IPD is presented, as are some characteristics of effective programs. Part I then considers the principles of high-quality IPD programs and uses these principles to develop a number of items related to quality. The final section of Part I addresses several data needs for the Year 2000 Education Goals report. A summary recaps the 12 items suggested to measure IPD for the SASS. Part II discusses the value of international comparisons of IPD generally, with particular attention to the use of computers and advanced telecommunications equipment. It is also suggested that the SASS include some items from the International Association for the Evaluation of Educational Achievement Computers in Education Study (CompEd). (Contains 48 references.) (SLD)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

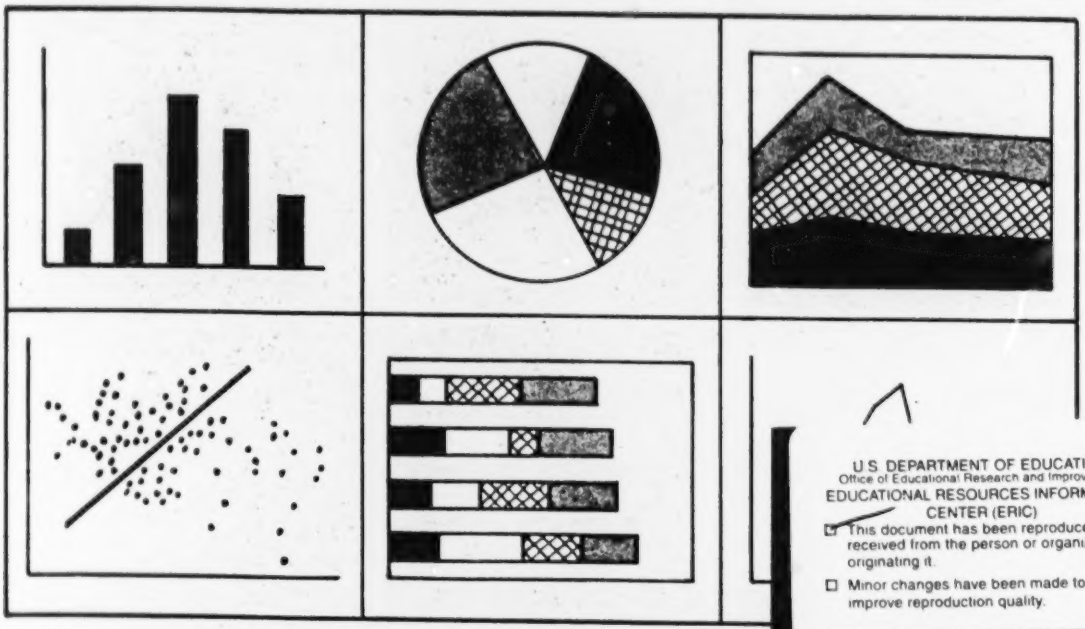
ED 418 985

NATIONAL CENTER FOR EDUCATION STATISTICS

Working Paper Series

Measures of Inservice Professional Development: Suggested Items for the 1998-1999 Schools and Staffing Survey

Working Paper No. 96-25 October 1996



TMO28264

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☑ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

BEST COPY AVAILABLE

U.S. Department of Education
Office of Educational Research and Improvement

Measures of Inservice Professional Development: Suggested Items for the 1998-1999 Schools and Staffing Survey

Working Paper No. 96-25 October 1996

Contact: Dan Kasprzyk
Surveys and Cooperative Systems Group
(202) 219-1588
e-mail: daniel_kasprzyk@ed.gov

U.S. Department of Education
Richard W. Riley
Secretary

Office of Educational Research and Improvement
Sharon P. Robinson
Assistant Secretary

National Center for Education Statistics
Pascal D. Forgione, Jr.
Commissioner

Surveys and Cooperative Systems Group
Paul D. Planchon
Associate Commissioner

The National Center for Education Statistics (NCES) is the primary federal entity for collecting, analyzing, and reporting data related to education in the United States and other nations. It fulfills a congressional mandate to collect, collate, analyze, and report full and complete statistics on the condition of education in the United States; conduct and publish reports and specialized analyses of the meaning and significance of such statistics; assist state and local education agencies in improving their statistical systems; and review and report on education activities in foreign countries.

NCES activities are designed to address high priority education data needs; provide consistent, reliable, complete, and accurate indicators of education status and trends; and report timely, useful, and high quality data to the U.S. Department of Education, the Congress, the states, other education policymakers, practitioners, data users, and the general public.

We strive to make our products available in a variety of formats and in language that is appropriate to a variety of audiences. You, as our customer, are the best judge of our success in communicating information effectively. If you have any comments or suggestions about this or any other NCES product or report, we would like to hear from you. Please direct your comments to:

National Center for Education Statistics
Office of Educational Research and Improvement
U.S. Department of Education
555 New Jersey Avenue, NW
Washington, DC 20208

Suggested Citation

U.S. Department of Education. National Center for Education Statistics. *Measures of Inservice Professional Development: Suggested Items for the 1998-1999 Schools and Staffing Survey*, Working Paper No. 96-25, by Dorothy M. Gilford. Project Officer, Daniel Kaspryzk. Washington, D.C.: 1996.

October 1996

Foreword

Each year a large number of written documents are generated by NCES staff and individuals commissioned by NCES which provide preliminary analyses of survey results and address technical, methodological, and evaluation issues. Even though they are not formally published, these documents reflect a tremendous amount of unique expertise, knowledge, and experience.

The ***Working Paper Series*** was created in order to preserve the information contained in these documents and to promote the sharing of valuable work experience and knowledge. However, these documents were prepared under different formats and did not undergo vigorous NCES publication review and editing prior to their inclusion in the series. Consequently, we encourage users of the series to consult the individual authors for citations.

To receive information about submitting manuscripts or obtaining copies of the series, please contact Ruth R. Harris at (202) 219-1831 or U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, 555 New Jersey Ave., N.W., Room 400, Washington, D.C. 20208-5654.

Susan Ahmed
Chief Mathematical Statistician
Statistical Standards and
Services Group

Samuel S. Peng
Director
Methodology, Training, and Customer
Service Program

Measures of Inservice Professional Development:

Suggested Items for the

1998-1999 Schools and Staffing Survey

Dorothy M. Gilford

October 1996

Table of Contents

	Page
Foreword	iii
PART I	1
Inservice Professional Development in the United States	1
What Is IPD?	3
A Framework for Classifying Types of IPD Programs	5
Application of the Framework to Develop SASS Items on Prevalence of IPD	9
Education Reform and Teacher Inservice Professional Development	12
Principles of High-Quality Professional Development Programs	18
Use of the Principles to Develop SASS Items Related to IPD Quality	22
Data Needs for the Year 2000 National Education Goals Report	29
Summary	33
PART II	34
International Comparisons of IPD for Use of Computers and Advanced Telecommunications Equipment	34
Value of International Comparisons	34
Value of State and Nation Comparisons	36
Need for Data on IPD for Use of Computers and Advanced Telecommunications Equipment	36
Proposal to Measure IPD for Computer Education in the 1998-1999 SASS	39
References	40
Appendix: Selected Items from the 1990-91 and 1993-94 Schools and Staffing Surveys	45

MEASURES OF INSERVICE PROFESSIONAL DEVELOPMENT: SUGGESTED ITEMS FOR THE 1998-1999 SCHOOLS AND STAFFING SURVEY

Dorothy M. Gilford

PART I

Inservice Professional Development in the United States

What information do we need about inservice professional development? Without attempting to be comprehensive, a number of questions immediately come to mind:

(1) How is inservice professional development (IPD) planned and coordinated?

(2) Is the school environment supportive of IPD?

(3) What is the range of programmatic approaches?

(4) What are teachers doing to strengthen their practice--what is the format, location, length, and content of their IPD programs?[1]

(5) What are the teachers' perceptions of the effectiveness of the IPD programs in which they participate?

(6) How effective are the IPD programs in improving teaching and in enhancing students' learning?

(7) How much effort are teachers expending on IPD in terms of time and their own money?

(8) How much support/encouragement are they receiving for IPD in the form of incentives, financial support, and time for IPD?

(9) How prevalent are induction programs for beginning teachers, what areas are addressed in these programs, who provides support, how effective are the programs?

(10) What is the level of public sector investment for IPD and what is it purchasing?

(11) Are there better ways to invest these resources?

---

[1] Mandel (1995) is the source for questions 4, 7, and 10.

(12) How are the characteristics of IPD changing over time?

(13) What can we learn from IPD in other countries (especially those whose students do well in international assessments) that might help improve IPD in the United States?

(14) What changes are needed in inservice professional development to meet the challenges of the current systemic reform movement in the United States?

Information relevant to most of these questions can be obtained from the 1998-1999 SASS. Exceptions are questions 6 and 10. Smaller, sharply focused studies would be more appropriate for studying the effectiveness of IPD programs in improving teaching and in enhancing students' learning. Nor is it feasible to estimate the level of public sector investment for IPD from a survey of schools and staff, since information would be needed from many sources other than the schools, e.g., federal, state, and district agencies. The subject of question 10, induction programs, is not addressed in this paper, but will be the subject of a later paper.

To respond to the other questions, it seems appropriate at this early stage of the development of the 1998-1999 SASS to suggest some possible items for SASS that would provide information related to the questions. The items will not be defined in great detail, since the purpose is to stimulate discussion about the value and feasibility of including the items in SASS--an approach that is consistent with the purpose of this paper which is to recommend items about IPD for possible inclusion in the 1998-1999 SASS. Throughout the paper, when an item is suggested that would provide information related to the questions, a footnote indicates the related questions.

The first part of the paper is limited to IPD in the United States, while Part II discusses the value of international comparisons of IPD generally and in particular for use of computers and advanced telecommunications equipment. The focus on IPD for computers in this paper is to provide ample time for consideration of a large potential addition to SASS on this topic in 1998-1999.

Part I starts by considering various definitions of IPD and its evolution--which is reflected in the definitions and the many types of IPD programs they encompass. Turning to the design of SASS items, it is noted that the large number of types of IPD programs calls for a framework to organize information collection and compilation. Such a framework is proposed and is used in the development of items related to the prevalence of IPD types. Since data from the 1998-1999 SASS will become available in the year 2000, the target year for measuring the effects of reform in meeting the goals of the Goals 2000 program, the national and state reform initiatives and their implications for IPD are discussed. A set of reform-oriented approaches for IPD is then presented, as are some characteristics of effective programs. Part I then considers the principles of high-quality IPD programs and uses these principles to develop a number of items related to quality. The final section of Part I addresses several data needs for the Year 2000 National Education Goals Report.

What Is IPD?

We first consider several different definitions of IPD followed by a brief description of the evolution of IPD, concluding with the type of IPD needed for successful reform.

Definitions of IPD

The Department of Education defines professional development as including "the rigorous and relevant strategies and organizational supports that insure the career-long development of teachers and other educators."

It includes preservice preparation and training of teachers as well as inservice professional development. This paper is limited to inservice professional development, i.e. to activities designed to maintain or upgrade teachers' professional skills following certification or inception of teaching including the induction period.

The Education Information Network in the European Union and the EFTA/EEA Countries (EURYDICE) defines in-service training as "...a variety of activities and practices in which teachers become involved in order to broaden their knowledge, improve their skills and assess and develop their professional approach" (Perron, 1991).

A somewhat different definition of IPD was proposed by Orlich: "programs or activities that are based on identified needs; that are collaboratively planned and designed for a specific group of individuals; that have a very specific set of learning objectives and activities; and that are designed to extend, add, or improve immediate job-oriented skills, competencies, or knowledge" (Orlich, 1989, p. 5)

A different view of staff development is provided by Odden and Marsh (1988, p. 598), who are concerned with reform of secondary schools: "The emerging mode of staff development addresses broader and more complex issues, is provided over longer time periods with considerable ongoing assistance, is linked to strategic directions of the district and the school, and is targeted to specific issues rather than across an array of disconnected areas." This mode of staff development is not only useful in reform efforts, but, as will be seen later in the paper, it is consistent with the current consensus of IPD experts about the principles of good IDP.

Bellanca (1995) distinguishes among inservice, staff development, and professional development from the systems point of view:

> Inservice is the scheduling of awareness programs, usually of short duration, to inform teachers about a new idea in the field of education.

> Staff development is the effort to correct teaching deficiencies by providing opportunities to learn new methods of classroom management and instruction.
>
> Professional development is a planned, comprehensive, and systemic program designed by the system to improve all school personnel's ability to design, implement, and assess productive change in each individual and in the school organization.

From the individual's point of view, Bellanca notes that "...professional development begins with the individual's election to expand his or her repertoire of knowledge or skills" in a program "that helps the individual understand and do higher quality teaching."

Evolution of IPD

The definitions of IPD reflect its evolution. As described by Bellanca, many years ago inservice opportunities were limited primarily to annual institutes at which teachers reviewed basic topics for annual relicensing. At a later date schools and districts introduced the workshops and conferences that are now so prevalent.

Staff development programs differ from these inservice events in that these new programs required twenty to thirty hours study of the theory and description of the practice (e.g. some of the science and mathematics programs that were introduced after Sputnik). Many staff development programs in the 1980s and the early 1990s dealt with cooperative learning approaches or with thinking-skills.

In the early 1990s staff developers began to investigate ways to match professional development with school improvement; to move away from teaching methods that might improve learning and to move toward management systems that would ensure raised test scores. They recognized that the constructivists' insights apply to professional development as well as to students' learning. District leaders began to understand the power of systemic support systems that communicate the idea that learning as a lifelong process is as important for the teachers as it is for the students.

Today the schools and IPD are being shaped by three ideas: results-driven education, systems thinking, and constructivism (Sparks, 1995). According to Sparks these ideas are causing changes in IPD. Today IPD is moving towards individual development and organizational development; it is driven by a strategic plan for the school district, each school, and the departments that serve schools; it is school focused rather than district focused; focuses on student needs and learning outcomes; involves multiple forms of job-embedded learning; focuses on a combination of generic and content-specific skills; is a major responsibility performed by all administrators and teacher leaders; is concerned with continuous improvement in performance for everyone who affects student learning; and is an indispensable process for preparing students for citizenship and productive employment.

Although some districts are moving in these directions, most districts are continuing past practice. In the schools today we can find all three types of IPD defined by Bellanca (inservice, staff development, and professional development) including programs that are mixtures of the types. Therefore SASS questionnaires need to cover all of them. To avoid confusion, this paper uses the term IPD as comprising the three types. Although there is no consensus about the best type of professional development, the view of staff development described by Odden and March, Bellanca's description of professional development, and the changed IPD described by Sparks correspond to the type of IPD experts consider to be essential for successful reform.

A Framework for Classifying Types of IPD Programs

As the number of approaches to IPD proliferates, it becomes increasingly important to have a systematic way of classifying the approaches in order to collect and collate information about IPD systematically. A framework for classifying IPD types will be useful in developing survey items about teachers' staff development activities and in analyzing the resulting data. The framework should be sufficiently general to cover the IPD activities of teachers during their induction period as well as those of experienced teachers, although some of the specific types of activities within the framework categories might differ for the two groups of teachers. For example, during the induction period teachers might have a mentor, a program of visiting and observing experienced teachers, a lighter work load, or regular meetings with senior staff and other beginning teachers. Experienced teachers might take college courses to update their knowledge of their subject matter field or recent research on pedagogy.

Before proposing the framework, three different approaches will be considered: building on the categories used in the 1993-94 SASS, using the five models of staff development proposed by Sparks and Loucks-Horsley (1990); or using the six research-based models proposed by Gall and Vojtek (1994).

IPD Categories Used in the 1993-94 SASS

The SASS Teacher Questionnaire included the following two questions on types of staff development: one concerning participation in any of eight activities related to teaching and the other concerning participation in programs that focused on each of five topics and the duration (in hours) of the program:

> 30. Participation in types of in-service activities. Since the end of last school year, in which of these activities related to teaching have you participated? (1) SCHOOL DISTRICT sponsored workshops or in-service programs, (2) SCHOOL sponsored workshops or in-service programs, (3) University extension or adult education courses, (4) College courses in your subject field, (5) Professional growth activities sponsored by professional associations, (6) Committee to integrate academic skills into

vocational education, (7) Other curriculum committee, (8) Committee on selecting textbooks or materials, (9) None of the above.

31. Participation in programs with a specific focus. Since the end of last school year, have you participated in any in-service or professional development programs which focused on the following topics? (a) Uses of educational technology for instruction (e.g. use of computer, satellite learning), (b) Methods of teaching your subject field, (c) In-depth study in your subject field, (d) Student assessment (e.g., methods of testing, evaluation, performance assessment), (e) Cooperative learning in the classroom. For each yes answer there is a question "How many hours did the program last?" with three options: 8 hours or less, 9-32 hours, or more than 32 hours. (See Appendix for question format.)

Sparks and Loucks-Horsley Models

Sparks and Loucks-Horsley (1990) proposed five models of staff development. The five models were based on their analysis of strategies that share similar assumptions about "where knowledge about teaching practice comes from" and "how teachers acquire or extend their knowledge". Loucks-Horsley and her colleagues (1987) assert that staff development programs that are effective in changing teachers' behavior have common characteristics. They combine theory and application, they provide time for reflection and practice and involve self study and cooperative learning. The five models are described by Loucks-Horsley and her colleagues (1989) and Darling-Hammond and Cobb (1995):

Training: e.g., workshops sponsored by schools or districts where an expert makes a presentation focusing on knowledge and skills teachers are lacking. This is the most common model. It includes (1) development of the theory and rationale behind the new behaviors to be learned, (2) demonstration or modeling, (3) practice in the training setting, and (4) guided practice in the field with feedback on performance (Loucks-Horsley et al., 1989).

Individually guided professional development: the teacher judges what his/her learning needs are and establishes a goal. The teacher chooses from workshops, library research visits, courses offered by the district, or may be reimbursed for college courses he/she takes, and other forms of self study to reach the goal.

Observation/assessment: these forms of IPD include clinical supervision, peer coaching and teacher evaluation with particular attention to certain behaviors and open discussion of the results.

School development/improvement processes: (This term is used by Darling-Hammond and Cobb; Loucks-Horsley describes this as curriculum and program development.) states, districts, or schools that try to improve education implementing whole-school change recognize the importance of teachers as agents of change. Teachers participate

in school improvement activities, curriculum and assessment development, and shared decision-making structures. (Little [1993] commented that teachers often learn more through school development processes than through more traditional staff development activities.)

Inquiry: includes such activities as teacher study groups, teacher research, teacher collaboratives/networks, or reflective inquiry. Such activities stem from the reform efforts that view the teacher as a guide or facilitator of students' active learning, which forces teachers to formulate questions about teaching and learning and to inquire both into students' thinking and learning and the effects of their teaching.

Loucks-Horsley and her colleagues (1989) provide a detailed description of examples of the actual implementation of each of these five types of staff development.

Gall and Vojtek Models

Gall and Vojtek base their six models on the objectives of professional development described by Sparks and Loucks-Horsley. These models are described in terms of the different roles for staff developers, and in ascending order of their complexity:

Expert-presenter: teachers assemble to listen to an expert talk about a topic at professional conferences, school district assemblies, university courses, and how-to workshops. Although this is the most prevalent model, it is not powerful in itself; it needs to be used in conjunction with other models. Objectives: development of teachers' knowledge and understanding

Clinical-supervision: the change-process supervisor, mentor, or coach identifies a teacher's concerns and goals, collects classroom observation data, and reviews data with the teacher. Objectives: development of teachers' instructional skills and strategies; development of teachers' ability to reflect and make sound decisions

Skill-training: trainer presents theory underlying the skills, explains, and models the skills. Teacher practices skills and receives feedback, is coached to promote transfer of training to own classroom. (Consistent with the constructivist movement in education which assumes that individuals learn best when they are given responsibility for developing their own knowledge and understanding.) Objectives: development of teachers' ,(1) instructional skills and strategies; (2) ability to improve students' academic achievement; (3) ability to develop and implement curriculum; (4) ability to reflect and make sound decisions

Action-research: teachers do research in their own work setting to answer their questions or test a new idea. Objectives: changing teachers' attitudes; development of teachers' ability to engage in school restructuring

Organization-development: a coherent, systematically planned, sustained effort at system self-study and improvement focusing explicitly on change in formal and informal procedures, processes, norms, or structures, and using concepts of behavioral science. The goals of organizational development are to improve organizational functioning and performance. Therefore it focuses on groups of teachers and other school staff. An organization-development specialist helps teachers and other staff diagnose strengths and weaknesses of their school or system, develop a plan of action, implement the plan, and evaluate its success. Objectives: changing teachers's attitudes; development of teachers' ability to develop and implement curriculum

C***hange-process***: the goal is a systemic innovation requiring change at the school or district level. Staff developers help teachers make a decision to adopt a systemwide innovation, put the innovation into action, and institutionalize it. Initiation requires staff development to get teachers to buy into change; staff development required for implementation includes "concrete, teacher specific training activities, ongoing continuous assistance and support during the process of implementation, and regular meetings with peers and others." Institutionalization, the decision to continue using the systemic innovation indefinitely, requires staff development to ensure that the innovation continues to be used as intended--helpful to have teachers and other educators who are highly skilled in the innovation and who can provide training and support to new staff. (According to Fullan, 1991), this is by far the most complex and lengthy of the models, requiring 3-5 years for moderately complex changes and 5-10 for major changes.) Objective: development of teachers' ability to engage in school restructuring

Proposed Framework

The types of in-service activities in the SASS questions are much more specific than the categories of types in the two sets of models and can easily be fitted into either typology. Since it is desirable to use general categories in a framework, only the Loucks-Horsley and Gall-Vojtek models were considered in the proposed framework, which consists of seven models. The models and the source of each model follow:

Expert-presenter: (Gall and Vojtek) This model was and may still be the most common form of IPD. It has been severely criticized by IPD experts as relatively useless for reform. Nonetheless it will be important to ascertain the extent to which it persists in 1998-1999. This model was not proposed by Loucks-Horsley.

Skill-training: (both typologies)

Observation/assessment: (both typologies)

Individually guided professional development: (Sparks and Loucks-Horsley). Gall and Vojtek did not include this model since they described their models in terms of the roles for staff developers.

Inquiry: (Sparks and Loucks-Horsley) This model includes action-research, which was a separate model in the Gall and Vojtek typology, and encompasses many more types of activities, e.g., teacher collaboratives/networks[2], and reflective inquiry.

Organization-development: (Gall and Vojtek) This model and the following "change-process" model are combined by Sparks and Loucks-Horsley. They are clearly separable, "organization-development" corresponding to efforts to improve the performance of teachers within an existing system, and "change-process" to changing the performance of teachers in a systemic innovation at the school or district level.

Change-process: (Gall and Vojtek) Because of the current emphasis on systemic reform, it is desirable to be able to measure the prevalence of "change-process" professional development.

Application of the Framework to Develop SASS Items on Prevalence of IPD

Before suggesting specific items, the recent work of others related to SASS items should be recognized. Mullens (1995) reviewed measurement approaches for classroom instructional processes. In 1996, Mullens and his colleagues undertook a comprehensive look at the theoretical linkages and current measurement of student learning, teaching quality, and professional development. They have released a preliminary draft of their work (Mullens et al., 1996) for comment. This draft describes the research base for linking student learning, teaching quality, and professional development; discusses professional development indicators, proposes a typology for the indicators, and reviews some 25 surveys for questions that correspond to the indicators. When agreement on the typology has been reached, they plan several additions to the draft: a display of the questions from the 25 surveys; identification of the elements of professional development that are important, measurable, and representative; and a prioritization of these elements.

Although the framework of models proposed in this paper can easily be fitted into Mullen's typology, it has not been done because of the typology's tentative state. Instead, suggestions are made for SASS to use the proposed framework of models to collect data on participation

---

[2] Because networks have become an increasingly important form of IPD in the reform of U.S. education, Lieberman and Grolnick (1996) studied sixteen networks to ascertain how they are formed, their focus, and how they are sustained. They note that networks provide ways of learning that are more in keeping with the professional lives of teachers. Networks engage "...school-based educators in directing their own learning, allowing them to side-step the limitations of institutional roles, hierarchies and geographic locations, and encouraging them to work together with many different kinds of people."

in professional development by type and related items about the types. Two items are suggested to replace items in the 1993-94 SASS.

Prevalence of IPD by Type, Time Teachers Spend in Each Type, and Total Dollars Teachers Spend on IPD

Question 30 in the 1993-1994 SASS can be expanded to provide time teachers spend on each type of IPD. (See Appendix for SASS questions.)

Item 1:[3] Prevalence of IPD by Type, Time Teachers Spend in Each Type, and Total Dollars Teachers Spend on IPD. The stem might be worded "Since the end of the last school year, how many hours have you spent in each of the following types of staff development? The item should list the various types of professional development activities under each of the seven major models. By providing columns corresponding to time intervals in SASS question 31 and including a column for zero time, data on
prevalence of participation in types of IPD as well as the time spent in the programs can be obtained. At the end of the item, add the question "How much of your own money have you spent on IPD during this school year?" (This last question was added as a reaction to Mandel's (1995) statement that "...the extent to which teachers meet their employers halfway is no less important" than the way schools invest their resources for IPD.)

Question 30 in the 1993-1994 SASS provides a list of eight types of professional development programs. These should be included as subcategories of the framework in the question for the next SASS to provide trend data.

The list should include other types that have been prevalent in the past (e.g.committees dealing with subjects other than curriculum, workshops sponsored by the school system during the summer, skill-training workshops, conference attendance, made a presentation at a conference or other professional meeting, participation in special projects, scheduled consultation with colleagues, and independent reading). The reform-oriented approaches discussed in a subsequent section should also be included. Mullen's ongoing review of IPD items in over 25 educational surveys may also produce additional types. The ultimate list will be long, but the question should not be too burdensome to teachers.

Another proposal made by Mandel (1995) is related to Item 1. He proposed that NCES undertake a set of case studies on a regular basis that would provide portraits of the range of programmatic approaches being undertaken in continuing education (also in preservice education.) He notes the messiness of measuring post-licensing education since it takes place in teacher centers, colleges and universities, school districts, seminars run by disciplinary and specialty groups, and in other informal settings such as seminars. Nonetheless he considers this an arena that is crucial to the health of the profession, one that deserves much more attention than it has received.

---

[3] Provides information related to introductory questions 3, 4, 7, and 12.

Although such case studies could not easily be a part of the SASS surveys, they could well be part of the development work that would help define SASS questions about the range and character of IPD.

Program Content and Length, and Teachers' Perceptions of Program Impact

It is possible to build on Question 31 in the 1993-1994 SASS to obtain information on the content of IPD programs. The SASS question obtained information on the duration of programs focused on five topics. Three of them were topics related to current types of methodological instruction important in reform: uses of educational technology for instruction, student assessment, and cooperative learning in the classroom. The other two were types of knowledge identified by Shulman (1986) as necessary for expert teaching--content knowledge and pedagogical content knowledge. (Shulman also named pedagogical knowledge as a third type of essential knowledge.). An important topic missing from this set is "classroom management skills", described by Mullens et al. (1995) as explaining rules, monitoring behavior, using accountability systems to keep track of students' work, communicating expectations clearly, and maximizing the amount of class time available for academic work. It would also be useful for the Year 2000 National Education Goals Report to add the topic "teaching limited English proficient (LEP) students" to the set covered in this question. A fuller discussion of this topic is included in a later section on the goals report. It would also be useful to add topics for teaching other types of special student populations such as multicultural classes or classes that integrate special education students.

It is possible to combine Question 32 with Question 31 and obtain teachers' opinions about IPD programs in each of the seven topics proposed for Question 31. The yes/no participation question in Question 31 can be eliminated by adding a "0 hours" category on the right side of the question. This leaves space on the left for the stub of Question 32 and for three columns: agree, no opinion, and disagree. Although this sacrifices the more detailed scale in Question 32, it has the advantage of removing the ambiguity in Question 32 that was created by not being able to differentiate among IPD programs.

Item 2:[4] Program content and length, and teachers' perceptions of program impact. Modify Question 31 by adding "classroom management skills" and "teaching limited English proficient (LEP) students" to the 5 types of program content, deleting the yes/no participation question, and adding portions of Question 32 on impact of the programs as described above.

Teachers are not alone in judging the quality of IPD programs. A number of experts and several organizations have provided sets of principles of effective IPD programs.

---

[4] Provides information related to introductory questions 4 and 5.

Education Reform and Teacher Inservice Professional Development

National Reform Initiatives

Education reform has been pervasive in the United States since 1983 when the first wave of reform was generated by the publication of *A Nation at Risk* (National Commission on Excellence in Education, 1983). Since preservice and inservice professional development are important elements of education reform, it is important to measure the characteristics and prevalence of professional development as fully as possible to understand the extent of these elements of reform. Several reform activities are discussed to illustrate the pervasiveness of education reform in the United States.

In 1986, a second wave of reform followed the 1983 wave. This second wave was stimulated by reports from a number of organizations including the California Commission on the Teaching Profession, the National Governor's Association, the Education Commission of the States, the Carnegie Forum on Education and the Economy, and the Holmes Group. These reports emphasized the need to professionalize teaching in order to improve education and stem what was described as "a rising tide of mediocrity." Renewal of a competent teaching force, as well as recruitment, preparation, and licensure were now recognized as central to educational reform efforts (Green, 1987)(Darling-Hammond and Cobb, 1995).

These reports stimulated a number of initiatives to establish and enforce professional standards for teachers: professional organizations such as the National Science Teachers Association established standards for certifying members, the National Board for Professional Teaching Standards was established in 1987 to provide advanced professional certification of teachers, the 20 member states of the Interstate New Teachers Assessment and Support Consortium (INTASC) developed model licensing standards and assessments for beginning teachers, and the National Council for the Accreditation of Teacher Education is reexamining its standards to make them consistent with those of INTASC and the National Board (Darling-Hammond and Cobb, 1995).

In 1990, President Bush and the nation's Governors established the National Education Goals and set a target date of the year 2000 for achieving them. This constituted a commitment to a nationwide effort to reform education around the aspirations of the goals (National Education Goals Panel, 1995a). With the advent of the Goals 2000: Educate America Act and the Improving America's Schools Act of 1994, federal funds became available for improving teaching. Several provisions of the legislation support IPD activities. Under the Goals 2000 legislation, funds for professional development are made available to states, and states in turn can award subgrants to local areas. Under the Improving America Schools Act, the Eisenhower Professional Development program will support sustained long-term IPD efforts related to academic standards. In addition, provisions in ESEA for disadvantaged children and bilingual education include funds for professional development.

Although teacher development was not included in the Governors' six original goals, it was added in the Goals 2000 Act in 1994, which renumbered the goals making the goal for teacher education and professional development Goal 4. The goal states:

> *By the year 2000, the Nation's teaching force will have access to programs for the continued improvement of their professional skills and the opportunity to acquire the knowledge and skills needed to instruct and prepare all American students for the next century.*

In 1994, Secretary Richard W. Riley established the U.S. Department of Education's Professional Development Team to examine research and exemplary practices related to professional development, to guide the Department's programs and to inform policy makers and practitioners across the country. This team agreed that "the mission of professional development is to prepare and support educators to help all students achieve to high standards of learning and development" (U.S. DoED, no date).

To provide assistance in implementing the legislated activities, the U.S. Department of Education plans to publish a series of idea books to share effective practices with educators in carrying out reform efforts. The first of the series, *Implementing Schoolwide Projects: An Idea Book for Educators* was published in 1994. It includes a section on professional development that provides a number of suggestions for IPD as well as descriptions of programs in specific schools.

Other federal government agencies also initiated major programs to reform education. For example, in 1991 the National Science Foundation initiated a Statewide Systemic Initiatives Program (SSI) to reform science, mathematics, and technology education. During the first three years of the program, the Foundation signed cooperative agreements with 26 states to undertake comprehensive reform initiatives in these fields, typically over a period of five years. The SSI is complemented by analogous programs for Urban and Rural Systemic Initiatives.

The SSI programs make heavy demands on teachers. "Teachers not only need to understand the requirements of the new systems, but in many instances, they are expected to change their practice, enhance their subject-matter knowledge, develop new curricula, and serve as overseer and assessors in the new process...They need opportunities to acquire the necessary knowledge and skills, to practice new strategies, and to interact with other teachers about what works and how to solve common problems. In short, a radically restructured and refocused system of professional development is needed. The system must be intensive, continuous, and connected to classroom practice (CPRE, 1995a, p.10). Professional development is one of the two strategies most frequently used by the states for changing practice based on the logic that changing practice requires changing the skills, knowledge, and beliefs of classroom teachers (CPRE, 1995b, p. 4). (The other strategy is funding local initiatives and model schools.)

As part of an ongoing effort of the NSF to increase the impact of its Teacher Enhancement Program, the Division of Elementary, Secondary, and Informal Education started a project known as the Local Systemic Change Through Teacher Enhancement Project (LSC). This project was started because NSF staff recognized the need for continuous staff development in the schools and the importance of working with whole schools instead of focusing on individuals if reform is to happen. The LSC project consists of a set of district-based projects designed to reform science, mathematics, and technology education through intensive upgrading of their K-8 teacher work force. In addition to implementing quality curriculum materials, the projects must provide at least 100 hours of professional development in content and pedagogy to all participating teachers. This program, which began in 1994 has funded 24 projects (involving 90 districts of varying sizes) for up to five years.

State Reform Initiatives

States have also initiated (and continue to initiate) reforms of teacher education in connection with their school restructuring efforts. In 1988 The Southern Regional Education Board (SREB) surveyed deans of education and deans of arts and sciences to determine the changes in the education of teachers since 1981. The resulting report identified education of teachers as a priority in education reform (SREB, 1988).

The Education Commission of the States (ECS) was also concerned with linking teacher education to school reform. State leaders expressed dissatisfaction with current recertification requirements, noting that they were heavy on costly inservice activities with little to show for the expenditures (Frazier, 1993). In the 1990s, they expect an increase in challenges to the accumulation of random course credits that have little significance to the teacher or the district. State leaders stressed that in outcomes-based systems, teacher IPD, whenever possible, should (1) be related to making a teacher more effective in helping students meet local and state goals and (2) should be designed to benefit the school and school district in reaching organizational goals. ECS recognized the need for continuing education and recertification of teachers by recommending that states "...should require recertification programs related to individual teacher needs and advancement of school and district needs and objectives" (Frazier, 1993). The Commission also noted the potential of the new professional development schools to provide an opportunity for higher-quality IPD activities than are currently available in most districts

As of July 1995, 49 states and the District of Columbia were engaged in standards-based education reform (American Federation of Teachers, 1995). However, experts are critical of the effectiveness of current professional development. For example Little (1993b) states that "... states and districts have been relatively slow to reshape professional development in ways that respond to the complexities and ambiguities of reform." One of the conclusions of CPRE's 1990 *Reform Up Close* study of high school mathematics and science in six states was that there was "...little by way of staff development that appeared up to the challenges ahead. Most staff development we found was fragmented and piecemeal, identified and delivered by persons distant from the classroom, and with little, if any,explicit connection to

strengthening academic instruction" (Porter et al., 1994). Further, in discussing the reform of professional development Sykes (1996) notes that two judgments form the contemporary concern for the professional development of teachers. The first is that teacher learning must be the heart of any effort to improve education and the second that conventional professional development is sorely inadequate. He considers that these two judgments represent the most serious unsolved problems for American education today. He notes the ineffectiveness of the "one-shot workshop" in changing what goes on in schools and classrooms and asserts that the resources for IPD "...are too meager and their deployment too ineffective to matter." Although isolated efforts are underway to promote teacher learning that will lead to improved practice, wide-scale efforts have yet to emerge. With the many reform initiatives underway and the extensive professional development that will take place between the 1993-94 SASS and the 1998-1999 SASS, it is extremely important that NCES measure change in this activity and its extent and effects as fully as possible.

Implications of Reform for IPD

Little (1993a) has noted that most current reform initiatives fit into one or more of five streams of reform, all of which present challenges to teachers:

> Reforms in subject-matter teaching (standards, curriculum, and pedagogy),
>
> Reforms centered on problems of equity and the increasing diversity of the student population,
>
> Reforms in the nature, extent, and uses of student assessment,
>
> Reforms in the social organization of schooling, and
>
> Reforms in the professionalization of teaching.

These reforms call for major improvements in students' outcomes including critical thinking (which may not be part of the teachers' current practice); identifying and altering classroom practices that contribute to student failure; authentic assessment, although teachers may not have the skills to design and implement such assessment; and school restructuring that may be based on principles rather than practices, without models to translate the principles into instructional strategies. Most of the existing resources for professional develop which are limited to skills training, are not ready to meet the demands of these reforms which call for expanding teachers' opportunities to learn, experiment, consult, and evaluate. This does not imply that there is no longer a role in professional development for the thoroughly tested models of skill training with opportunities for classroom practice and classroom coaching and/or consultation. Skill development models can be very effective for training related to specific transferable skills and new ideas.

BEST COPY AVAILABLE

Today most IPD is carried out by school districts. It consists of formal education activities such as workshops, in-service programs lasting a day or a half day at which experts lecture and which may include each teacher's choice of workshops led by trainers. The programs may provide material or suggestions that are useful to the teachers, but there is seldom follow-up to evaluate the effectiveness and utility of the programs. Typically they have little effect on practice because they lack focus, intensity, follow-up, continuity, and linkage with the district's goals for student performance. (Corcoran, 1995). Another common form of IPD is highly theoretical university coursework; half of all teachers reported earning college credits during the period 1988-91 (NEA, 1992). But these are not the types of IPD that will meet the demands of reform. In discussing the condition of teaching in America today Darling-Hammond (1995) notes that although attempts are presently under way across the country to make a strategic investment in the professional development of teachers, they are embryonic and scattered rather than systematic. She recognizes, however, that "... the possibilities for rethinking how schools structure the use of teacher time, the opportunities for team teaching and collaboration, the development of teacher and school networks, and the responsibilities of teachers are probably greater now than they have ever been." These opportunities consitute some of the characteristics of good professional development. The next section considers this topic more extensively.

Reform-Oriented Approaches for Professional Development

Corcoran (1995, pp. 5-6) describes seven relatively new approaches to professional development that may be effective in reform and comments (paraphrased) on their desirable characteristics:

> Joint work--shared responsibility for tasks such as team teaching, curriculum committees, or other jobs that create independence among teachers and require cooperation. (Provides opportunities for exchange among teachers and reflection about practice.)
>
> Job enrichment--expansion of teachers' work in ways that require new skills, such as the scoring of portfolios in Vermont or serving as mentors to beginning teachers. (Provides opportunities for teachers to discuss their practice and share ideas.)
>
> Teacher networks--focus on specific subject-matter and seek to deepen teachers' understanding of content and their facility with new teaching strategies. (Offer access to a "professional community" and discourse about improving practice.)
>
> Collaborations between schools and colleges--often required to fill need for professional development of sufficient intensity. (Helps teachers meet the requirements of reforms for deeper knowledge of subject matter.)
>
> Professional development (or practice schools)--although primarily used in pre-service development, they could bring novice and experienced teachers together with

university clinical faculty to improve their practice through observation, low-risk experimentation, reflection and coaching.

National board certification--the process of applying for certification is thought to be excellent professional development since it requires teachers to document their practice, reflect on their strengths and weaknesses, and demonstrate specific knowledge and skill.

Teachers as researchers--research in classrooms and schools in cooperation with their colleagues and university faculty. Frequently directed at problems identified by teachers, or may be defined by academic interests. (Benefits: stimulate discussions, help organizations define problems, and lead to changes in practice and policy.)

These approaches are consistent with the principles of high-quality professional programs that are discussed in a later section. They also share some common characteristics:

They respect the expertise of accomplished teachers

They are integrated with teachers' work

They are based on current research on teaching and learning

They recognize teachers as a valuable source of information regarding effective professional development and include them in its design and implementation

Little (1993a, p. 4-5) also addresses alternatives to traditional approaches. These alternatives are ones "...that engage teachers in the pursuit of learning in ways that leave a mark on their perspectives and their practice." She describes four alternative models, the first two being ones that were also listed by Corcoran:

Teacher collaboratives and other networks--subject-specific teacher collaboratives share the view that teachers' professional development encompasses (1) teachers' knowledge of academic content, instruction, and student learning; (2) teachers' access to a broader network of professional relationships; and (3) teacher leadership in the reform of systemwide structures. Collaboratives underscore teachers' involvement in the construction of subject matter knowledge. Thus they prepare teachers to make informed responses to reforms in subject matter teaching and student assessment.

School-University collaborations targeted at school reform-- On the whole, these partnerships have formed between individual activists in universities and schools or districts, or between individual consultants and schools, or between departments of education and local schools. They have not routinely incorporated faculty from subject matter departments. They hold promise as vehicles for more effective professional development, e.g. insider/outsider attached to the school to provide support, expand

access to resources and to critique school progress e.g.,The Coalition of Essential Schools. Other partnerships such as the Chicago Project on Learning and Teaching have the goal of promoting breakthroughs in conceptual understanding for the teachers and to immerse them in math experiences.

Subject matter associations--Clearly they are exerting increasingly powerful influences in the design of subject curriculum and assessment standards. They are positioned to exert strong influence on teachers' dispositions toward reform proposals. Their effect may be multiplied if the association's most active members also occupy leadership roles within their school, district, or union.

Special institutes and centers--teachers say they provide a good professional development experience. They offer great depth and focus, enough time to grapple with ideas and materials, the sense of doing real work rather than being talked at, and an opportunity to consult with colleagues and experts. (They also cost more per participant, and are less accessible than more modest local programs.) Teachers enjoy the opportunity for sustained work with ideas, materials, and colleagues.

The approaches described above can be effective only if the structures exist to make them available to teachers and to provide them support for classroom implementation of what they have learned. The three common characteristics of good staff development structures are identified by Loucks-Horsley et al. (1989, p45-48):

Support for the practice and refinement of new behaviors in the classroom

Opportunities for teachers to talk and work together to reinforce, problem solve, and encourage change

A clear message that the new behaviors are important and teachers are expected to use them

They describe several types of effective staff development structures for elementary science: institutes similar to NSF- sponsored institutes of the past, teachers centers, and networks and partnerships, all of which were mentioned by either Corcoran or Little.

Principles of High-Quality Professional Development Programs

"How often do you hear statements to the effect that the continuous professional development of teachers is the key to school improvement? ...the *general* endorsement of inservice education means nothing without an accompanying understanding of *the characteristics of effective as compared with ineffective inservice education efforts*. Nothing ... has promised so much and has been so frustratingly wasteful as the thousands of workshops and

conferences that led to no significant change in practice when the teachers returned to their classrooms" (Fullan, 1991).

Although successful school reform requires many ingredients, the one essential ingredient is the classroom teacher. The Goal 4 Resource Group of the National Education Goals Panel is well aware that only recently have we fully appreciated the ways of teaching complex subject matter to diverse students and consequently many of our current teachers are under- or unprepared. They provide a compact definition of high-quality IPD: "Professional development should be continuous, sustainable, site-based, context driven, focused on student learning and designed to promote school-wide innovation and change." (NEGP, 1995c).

Corcoran (1995) states that the reform movement will require a shift from a behaviorist approach to teaching "...approaches which actively engage students in the construction of knowledge." A number of experts and organizations have discussed principles and policies for professional development programs that are consistent with the current reform efforts. (Corcoran p.3, 1995) summarizes their work and provides a list that is based on the work of G. Griffin (1982), B. Joyce and B. Showers (1982), S. Loucks-Horsley, C. Harding, M. Arbuckle, L. Murray, C. Dubea, and M. Williams (1987), N. L. Zimpher and K. R. Howey (1992), J. W. Little (1993), H. Price (1993), National Staff Development Council (1994), and H. Hodges (1994). Their suggestions include programs that incorporate the following principles or policies:

"Stimulate and support site-based initiatives. Professional development is likely to have greater impact on practice if it is closely linked to school initiatives to improve practice.

Support teacher initiatives as well as school or district initiatives. These initiatives could promote the professionalization of teaching and may be cost-effective ways to engage more teachers in serious professional development activities.

Are grounded in knowledge about teaching. Good professional development should encompass expectations educators hold for students, child-development theory, curriculum content and design, instructional and assessment strategies for instilling higher-order competencies, school culture and shared decision--making.

Model constructivist teaching. Teachers need opportunities to explore, question and debate in order to integrate new ideas into their repertoires and their classroom practice.

Offer intellectual, social and emotional engagement with ideas, materials and colleagues. If teachers are to teach for deep understanding, they must be intellectually engaged in their disciplines and work regularly with others in their field.

Demonstrate respect for teachers as professionals and as adult learners. Professional development should draw on the expertise of teachers and take differing degrees of teacher experience into account.

Provide for sufficient time and follow-up support for teachers to master new content and strategies and to integrate them into their practice.

Are accessible and inclusive. Professional development should be viewed as an integral part of teachers' work rather than as a privilege granted to "favorites" by administrators."

Little (1993a) also discusses principles and adds three:

Should take explicit account of the contexts of teaching and the experience of teachers

Should offer support for informed dissent

Should place classroom practice in the larger contexts of school practice and the educational careers of children

The U.S. Department of Education's Professional Development Team also developed a set of principles (1995). Their principles reflect related research and exemplary practices and the review and comments on the principles by a large number of people and organizations. The team provided ten principles:

Focuses on teachers as central to student learning, yet includes all other members of the school community

Focuses on individual, collegial, and organizational improvement

Respects and nurtures the intellectual and leadership capacity of teachers, principals, and others in the school community

Reflects best available research and practice in teaching, learning, and leadership

Enables teacher to develop further expertise in subject content, teaching strategies, uses of technologies, and other essential elements in teaching to high standards

Promotes continuous inquiry and improvement embedded in the daily life of schools

Is planned collaboratively by those who will participate in and facilitate that development

Requires substantial time and other resources

Is driven by a coherent long-term plan

Is evaluated ultimately on the basis of its impact on teacher effectiveness and student learning; and this assessment guides subsequent professional development efforts

Although the Department's list repeats some of those suggested by Corcoran and Little, there are no inconsistencies among the principles.

More recently, Howley and Valli (1996) proposed another set of principles for effective professional development, which they named "the consensus model of professional development. The model is based on the implications of recent research on learning for professional development. They first summarize the convergence of research on learning reported in several recent syntheses of such research. Five "learner-centered principles" of learning have been identified:

- One's existing knowledge serves as a foundation of all future learning
- The ability to reflect upon and regulate one's thoughts and behaviors is essential to learning and development
- Motivational or affective factors along with the motivational characteristics of the learning tasks play a significant role in the learning process
- Learning processes through various common stages of development influenced by both inherited and experiential/environmental factors
- Learning is as much a socially shared undertaking, as it is an individually constructed enterprise

This research on learning has stimulated a number of new studies of professional development that reach remarkably consistent conclusions "...with respect to the characteristics of professional development that are most likely to lead to improvements in actions of educators that contribute to student learning." Based on these studies, Hawley and Valli propose their new consensus model of professional development with eight design principles:

- Driven, fundamentally, by analyses of the differences between (a) goals and standards for student learning and (b) student performance
- Involves learners (e.g., teachers) in the identification of their learning needs and, when possible, in the development of the learning opportunity and/or the process to be used
- Is primarily school-based and integral to school operations

- Provides learning opportunities that relate to individual needs but are, for the most part, organized around collaborative problem solving

- Is continuous and on-going, involving follow up and support for further learning--including support from sources external to the school

- Incorporates evaluation of multiple sources of information on (a) outcomes for students and (b) processes that are involved in implementing the lessons learned through professional development

- Provides opportunities to engage in developing a theoretical understanding of the knowledge and skills to be learned

- Is integrated with a comprehensive change process that deals with the full range of impediments to and facilitators of student learning

Hawley and Valli's list is further evidence of the consensus among researchers--all but one (the fourth) of their principles are included in the lists considered earlier. Hawley and Valli not only provide illustrative references that support each of the principles in their model, but they document the research base for this list by tabulating the relationships between the five learning principles and the design principles of the consensus model of professional development.

Use of the Principles to Develop SASS Items Related to IPD Quality

The list of principles is heterogeneous--it contains aspects of the planning and coordination of IPD; ways in which schools organize to facilitate and stimulate teacher learning; the growth opportunities being provided for teachers; school support for professional development; and school environment. Each of these topics should be explored in SASS to study the extent to which current IPD programs are consistent with the principles of high-quality professional development programs.

Information about school-based IPD programs could be obtained by adding questions to the Principal Questionnaire and Teacher Questionnaire. Teachers could also provide information about the off-site IPD in which they participate.

Planning and Coordination of Professional Development

Two items are suggested related to planning and coordination of professional development. The first pertains to elements of effective planning and coordination of IPD. The second to reasons why teachers choose not to participate in IPD. Although the second item addresses neither planning nor coordination, it provides information needed by policy makers to take

appropriate corrective actions, actions that may include improvement of their planning and coordination of IPD.

Elements of Planning and Coordination of IPD. An item on effective elements of planning and coordination of IPD should be added to the Principal questionnaire. The following suggestions for the item are drawn from Corcoran's framework for reviewing IPD policies and practices (Corcoran, 1995), from expressed needs of the Goal 4 Resource Group of the National Education Goals Panel (1995), and from the principles published by the U.S. Department of Education's Professional Development Team. (Questions have been added that are not in the above list of principles and some that are included in the list have been reworded.)

Item 3:[5] Planning and Coordination of IPD. Provide columns for answering yes or no to each question.

- Is there a state plan for IPD and are there state priorities?
- Does the state or district require that schools develop plans?
- Are IPD activities tied to school improvement?
- Is there coordination among providers of IPD?
- Are teachers required to develop professional improvement plans?
- Are teachers involved in the development of the learning opportunity and/or the process to be used?
- Are teacher salary increments dependent on the job relatedness of IPD activities?
- Are state initiatives to set standards and develop curriculum frameworks and new assessments supported by appropriate professional development?
- Is your school or school district engaged in partnerships that will promote community stakeholders' support of programs for professional development of educators?

Reasons for Non-participation IPD Programs. Little (1993b) discusses the wide variation in profiles of participation in IPD by teachers with comparable experience and teaching assignments. She notes that these differences persist even in schools formally committed to reform initiatives. She illustrates this point with data from the Illinois Writing Project in which less than half the teachers in urban schools attended the after-school workshops. Understanding why teachers choose not to participate in IPD programs is important to policy makers so they can take appropriate action to increase participation. Such information could be obtained by adding an item to the Teacher Questionnaire for teachers who have not participated in IPD during the prior year. The options in this item are paraphrased from Little's specific illustration.

---

[5] Provides information related to introductory question 1.

Item 4[6]. Reasons for Non-participation in IPD Programs. Select up to three reasons why you chose not to participate in IPD programs during this school year. Enter "1" for the most important reason, if you select two or three reasons enter "2" for the next most important, if you select three reasons, enter "3" for the least important reason.

Priority

- _____ Unimpressed with the quality of the program
- _____ Already expert in the practices of the program
- _____ Pressed by the demands of too many projects
- _____ Teaching load too burdensome
- _____ Committed to other activities that required my time, thought, and energy
- _____ Not persuaded that participation would make a difference to my students
- _____ Discouraged by failures of administrative leadership
- _____ Truly discouraged about teaching

School Organization for Teacher Learning and Other Growth Opportunities Provided for Teachers

An item on the ways schools organize for teacher learning by integrating teacher development into the daily activities of teaching and other growth opportunities provided for teachers should be added to the Principal Questionnaire. The questions are derived from Corcoran's framework for reviewing professional development policies and practices and the Goal 4 Resource Group. They also stem from two of the six aspects of school organization identified by Little (1996) as related to teachers' learning and professional development: (1) extent of collective focus on students and shared responsibility for student learning, and (2) teacher assignment policies and practices that satisfy criteria of fit, stretch, and community. (The questions include some not in the above list of principles and some that are reworded.)

Item 5[7]: School Organization for Teacher Learning and Other Growth Opportunities Provided for Teachers. (Provide columns for answering yes or no to each question.)

- Are growth opportunities built into teachers' workdays?
- Do teachers have regular opportunities to work together?
- Do teachers have a high level of collective responsibility for student learning?
- Do teachers engage in systematic, sustained, collective study of student work--coupled with a collective effort to figure out the roots of student work in the practice and choices of teaching?

---

[6] Provides information related to introductory question 8.

[7] Provides information related to introductory question 8.

- Does school policy support the individual and collaborative investigation of selected problems and questions that arise in teaching?
- Is it school policy to develop the organizational habit of shared student assessment?
- Are teacher assignments based on making the best use of an individual teacher's existing knowledge, experience, and interest?
- Are teacher assignments based on stretching teachers' understanding and skill as well as using their existing expertise?
- Are teaching assignments designed to configure a staff in ways that provide a basis for professional exchange, mutual support, or shared inquiry?
- Are teachers performing professional or administrative tasks requiring significant skills?
- Is support provided for beginning teachers?
- Does your school district support teachers who are seeking National Board Certification?
- How much time is set aside for professional development during the school year? (Provide 3 time options.)
- Do all teachers have full and equal access to high-quality IPD activities?
- Do these opportunities vary across grade levels?
- Do the state colleges and universities provide appropriate courses accessible to all teachers?
- Does your school have sustained partnerships with other organizations (e.g., professional development schools or professional associations) that provide a home for professional development options?

Support for IPD

In addition to embedding teacher learning in the daily work of teaching and providing other opportunities for IPD, schools and districts can provide several types of support for IPD. They can provide incentives, time, and support for teachers to participate in IPD programs. participation.

Incentives to Participate in IPD. Policy makers need to balance individual and organizational interests in IPD, and to provide incentives so they are aligned. The arrangements for IPD should support schoolwide improvement and at the same time stimulate the teacher's professional growth and engagement in teaching, and support career advancement (Corcoran, (1995 p.6). An item should be added to the Principal Questionnaire on incentives. Again, the options in the question come from Corcoran and Little.

Item 6[8]: Incentives to Participate in IPD. What incentives are provided for teachers to participate in professional development and to improve their practice? (Provide columns to answer yes or no to each question.)

---

[8] Provides information related to introductory question 8.

- Is professional development linked to personnel evaluation and recertification?
- Do districts reimburse college tuition for graduate study?
- Are salary increments linked to professional development?
- Does professional growth bring increased responsibility, status, or recognition?
- Are school resources available for teachers to participate in professional community and personal endeavors beyond the school?

It would also be useful to ask the question,

- How do the incentives affect teachers in different grade levels, or career stages?

but this would require a separate item with a different structure.

Providing Time for Professional Development. In the Foreword to the publication *Breaking the Tyranny of Time: Voices from the Goals 2000 Teacher Forum* (U.S. DoED, 1994) the Secretary of Education, Richard W. Riley, describes the critical element of time as one of the greatest issues in education reform. The teachers who participated in the forum, 119 in number, identified time as the most critical resource for the success of school reform. It is no surprise that one of the eight recommendations of the conference was *"We recommend that teachers be provided with the professional time and opportunities they need to do their jobs."*

Corcoran (1995) discusses one of the steps policy makers should be taking to improve professional development for teachers--increasing the time available for teacher interaction and professional development. He summarizes five approaches described by Watts and Castle (1993) that have been used to increase the time available for IPD:

> *Using substitutes or releasing students.* Some schools are effectively using one morning or afternoon a week for teacher development and other improvement activities. However, this approach provides only small blocks of time and is often resented by parents.
>
> *Purchasing teacher time by using permanent substitutes, retirees, or giving compensation for weekends or summer work.* This is expensive, sporadic, and some teachers will not participate on weekends or during the summer.
>
> *Scheduling time by providing common planning time for teachers working with the same children or teaching the same grade on a regular basis.* This is often done in schools using instructional teams, but it could be done in many more schools if assistance was provided with block scheduling.
>
> *Restructuring time by permanently altering teaching responsibilities, the teaching schedule, school day, or school calendar.* This has serious implications for busing, union contracts, facilities maintenance, state regulations, and budgets. It also means

changing public expectations--a reason few schools or districts have taken this approach.

Making better use of available time and staff. Decrease the hours teachers spend in the classroom to provide them with more time for professional work. Although costly, the costs could be minimized by:

Occasionally substituting appropriate television programming for regular instruction;

Using adult volunteers or older students to provide extracurricular activities for children;

Using occasional large classes for special topics, for exposure to the arts, or presentations of outside "experts";

Using independent study to let students pursue projects on their own: and/or

Involving more students in community service activities.

An item should be added to the Principal Questionnaire asking what actions have been taken to provide teachers with more time for professional development based on the approaches described above.

Item 7:[9] Providing Time for Professional Development. Which of the following actions (a list developed from the five approaches described above) have been taken in your school to increase time available to teachers for IPD. (Columns should be provided for answering yes or no to each action.)

Support for IPD in Main Teaching Assignment Field. In Question 33 of the 1993-94 SASS, the first two questions pertain to providing time for IPD and the other questions refer to monetary support or support for professional growth credits. Although this question appears to overlap the proposed Item 7, this question is limited to IPD related to the teacher's main teaching assignment field and is addressed to teachers rather than to the principal, which makes it possible to look at equity among groups of teachers in the allocation of these types of support. Therefore this question should be repeated, but with the addition of an item for "leaves or sabbaticals."

---

[9] Provides information related to introductory question 8.

Item 8:[10] Support for IPD in Main Teaching Assignment Field. Repeat Question 33 of the 1993-94 SASS, but starting with the addition of an item for "sabbaticals and leaves" and a change in the wording of the current first item to read "other released time from teaching."

School Environment

Although high quality professional development programs that influence the knowledge and abilities of teachers are important, teachers also need to work in an environment which is supportive of good teaching. Research on educational quality, teacher professionalism, policy implementation, effective schools, and educational change suggests that several characteristics of the school environment are related to effective education (Loucks-Horsley et al., 1989):

- Clear purposes and outcomes
- Adequate, appropriate resources, including time, staff, and materials
- A robust conception of staff development
- Norms of experimentation, risk taking, collegiality and collaboration
- Involvement in decision making
- Leadership and support

The importance of these characteristics of school environment were recognized in the development of the 1993-94 SASS in three of the questions about teachers' perceptions and attitudes toward teaching:

> Question 44. At this school, how much actual influence do you think teachers have over school policy in each of the following areas? (See Appendix A for the list of areas and the scale used in this question and the following question.)
>
> Question 45. At this school, how much control do you feel you have IN YOUR CLASSROOM over each of the following areas of your planning and teaching?
>
> Question 47. Do you agree or disagree with each of the following statements? (A list of 25 statements that relate to the six characteristics of school environment listed by Loucks-Horsley follows.)

These three questions should be repeated in the 1998-1999 SASS to make it possible to measure the major changes in school environment that can be expected between 1993-94 and 1998-1999 due to the systemic reform efforts underway in many schools and districts. These efforts can be expected to lead to (1) increased professionalization of teachers and (2) schools.

---

[10] Provides information related to introductory question 8.

classrooms, and teachers that value questions, experimentation, risk taking and collaborative problem solving. Both of these results are dependent in part on school environment.

Some augmentation of the questions, particularly Question 47, might be desirable. The preliminary report by Mullens et al. (1995) included a review of the items on professional development in over 25 surveys. They report finding six surveys that include items on 32 elements thought to affect school culture. It would be desirable to match these 32 elements against those used in the SASS questions to look for possible additions to the SASS questions. It would also be desirable to group the statements for each of Loucks-Horley's six characteristics so that it would be easier for teachers to understand the purpose of the question.

Item 9[11]. Teachers' Influence Over School Policy. Repetition of SASS question 44.

Item 10[12]. Teachers' Control in the Classroom of Planning and Teaching. Repetition of SASS question 45.

Item 11[13]. Teachers' Perceptions of School Environment. Repetition of SASS question 47 with items grouped by the Loucks-Horsley characteristics and with possible additional items identified in research.

Data Needs for the Year 2000 National Education Goals Report

In 1994, the Goals 2000 legislation formally authorized the National Education Goals Panel (NEGP), a bipartisan committee of state and federal officials that had been meeting since 1990 to monitor progress toward the goals. Charges to the panel included continuing to play a major role in tracking education reform through its annual reports on progress toward meeting the education goals. The 1995 goals report (National Education Goals Panel, 1995b), which is the Panel's fifth report, includes a section on teacher education and professional development that lists the four objectives under goal 4:

> All teachers will have access to preservice teacher education and continuing professional development activities that will provide such teachers with the knowledge and skills needed to teach to an increasingly diverse student population with a variety of educational, social, and health needs.

---

[11] Provides information related to introductory question 2.

[12] Provides information related to introductory question 2.

[13] Provides information related to introductory question 2.

All teachers will have continuing opportunities to acquire additional knowledge and skills needed to teach challenging subject matter and to use emerging new methods, forms of assessment and technologies.

States and school districts will create integrated strategies to attract, recruit, prepare, retrain, and support the continued professional development of teachers, administrators, and other educators, so that there is a highly talented work force of professional educators to teach challenging subject matter.

Partnerships will be established, whenever possible, among local educational agencies, institutions of higher education, parents, and local labor, business, and professional associations to provide and support programs for the professional development of educators.

The report also provides nine measures of progress towards the goal of which three deal with professional development and two with teacher support. The other measures relate to preparation to teach limited English proficient students and preservice teacher education and certification. All of the measures were derived from the Teacher Questionnaires in the 1991 and 1994 School and Staffing Surveys. In fact the NCES expanded the section on staff development in the 1993-1994 SASS to provide information needed by NEGP.

Enhancements for the Year 2000 Goals Report Derived from the Suggested Items

The items that have been suggested for inclusion in the 1998-1999 SASS would have a very positive effect on the goals report for the year 2000 by providing additional detail for measures used in the 1995 report as well as a number of additional measures. Each of the five measures on professional development and teacher support in the 1995 report are discussed in turn showing the source of the information used in the 1995 report and the effect the suggested items could have for the year 2000 report.

The three measures of professional development are direct measures of the goal:

Participation in Professional Development Activities on Selected Topics:
Percentage of teachers who reported that they participated in in-service or professional development programs on various topics (uses of educational technology, methods of teaching subject field, in-depth study in subject field, and student assessment) since the end of the previous school year, 1994. Participation is tabulated for all teachers, and for urban, suburban, and rural teachers.
(Source: SASS Question 31)

Item 2 would add two topics to the list in Question 31. Both of these topics are important in reform: classroom management skills and preparation to teach limited English proficient (LEP) students. It would also provide information on the teachers' opinions about the impact of the programs.

Support for Professional Development: Percentage of teachers who reported that they received various types of support (released time for teaching or scheduled time, travel, per diem expenses, tuition, and/or fees: and professional growth credits). Support is tabulated for all teachers, and for urban, suburban, and rural teachers. (Source: SASS Question 33)

Item 8 would add one additional type of support "sabbaticals and leaves" to the list in the 1993-94 SASS.

Participation in Different Types of Professional Development Activities: Percentage of teachers who reported that they participated in various activities related to teaching (workshops or in-service programs, college courses, and activities sponsored by professional associations) since the end of the previous school year, 1994. Participation is tabulated for all teachers, and for beginning teachers, teachers with 4-10 years of experience, and teachers with more than 10 years of experience. (Source: SASS Question 30)

Item 1 would greatly expand the list of types of IPD activities. Of special importance, it would include new approaches for IPD that may be effective in reform. In addition it would provide information on the amount of time spent in each program and the teachers' total monetary expenditure for IPD.

The two measures that deal with teacher support are direct measures of the third objective and are closely related to in-service professional development:

Support Through Formal Teacher Induction Programs: Percentage of teachers (by experience categories) who reported that during their first year of teaching, they had participated in a formal teacher induction program to help beginning teachers by assigning them to master or mentor teachers, 1994. Information is provided for the following categories of teachers: all, elementary, secondary, urban, suburban, and rural. Information is also provided on change in participation in induction programs between 1991 and 1994.
Source: SASS 1993-94 Question 35a and SASS 1990-91 Question 28a

As indicated earlier, items about induction programs for the 1998-1999 SASS will be the subject of a subsequent paper.

Teacher Influence Over School Policy: Percentage of teachers who reported that teachers in their school have influence over school policy in selected areas (determining the content of in-service programs, establishing curriculum, and setting discipline policy). Information is provided for the following categories of teachers: all, elementary, secondary, urban, suburban, and rural. Information is also provided on the change between 1991 and 1994 in teacher influence over school policy for the selected areas.

(Source: SASS 1993-1994 Question 44 and SASS 1990-91 Question 39)

Since Item 9 is a repetition of Question 44,it will provide no additional information.

In addition to the above items on professional development and teacher support, the NAGB report includes two measures that deal with preparation to teach limited English proficient (LEP) students: (1) percentage of teachers who reported that they have LEP students in their classes and have received training to teach LEP students and (2) percentage of teachers who reported that they have received training to teach LEP students, 1994. The SASS question on training does not inquire when the training was received so it is not clear whether the training was preservice or inservice. The suggestion in Item 2 to add a topic on preparation to teach LEP students to the list of topics of IPD programs in Question 31 of the Teacher Questionnaire, would eliminate this ambiguity and help measure current efforts for the first objective of Goal 4. As mentioned, it would also be possible for Item 2 to include topics related to teaching other special student populations, which would provide even more information relevant to the first objective.

Additional Measures for the Year 2000 Goals Report

In addition to providing more information directly related to the IPD measures in the Goals Report for the year 1995, the suggestions in other items would provide additional measures on the following topics for the goals report for the year 2000:

Item 3: Planning and Coordination of IPD.

Item 4: Why Teachers Choose Not to Participate in IPD Programs.

Item 5: School Organization for Teacher Learning and Other Growth Opportunities Provided for Teachers.

Item 6: Incentives to Participate in IPD.

Item 7: Creating Time for Professional Development.

The selection of indicators for the 1995 Goals Report was limited by data availability. The resource group identified some future data needs, two of which might be filled by SASS 1998-1999:

> The matter of equity regarding the number of teachers having full access to high quality professional development activities should be reported.
>
> Partnerships that provide and support programs for the professional development of educators should be established.

Data for both of these topics could be provided by adding questions to the Principal's Questionnaire. As proposed, Item 3 on Planning and Coordination contains the question: "Is your school or school district engaged in partnerships that will promote community stakeholders' support of programs for professional development of educators? Item 5 on School Organization for Teacher Learning and Other Growth Opportunities Provided for Teachers contains the question "Do all teachers have full and equal access to high quality IPD activities?

Board certification. The Resource Group also suggested indicators that show the number of teachers who are seeking to become Board Certified and the number of school districts that are supporting teachers who are seeking National Board certification. Information on the number of schools that are supporting teachers who are seeking board certification could be obtained from Item 5 which includes the question "Does your school district support teachers who are seeking National Board certification?" Information on teachers who are seeking or who have received National Board certification could be obtained by adding questions to the Teacher's Questionnaire in the section on teacher training.

Item 12[14]: Board Certification. Add a new question with the two parts: Have you received National Board certification? Are you seeking National Board certification?

In summary, the year 2000 goals report could provide a much more comprehensive picture of progress toward Goal 4 if the twelve suggested items were adopted.

Summary

How well do the suggested items respond to the 14 introductory questions? Early in the paper it was noted that it is not feasible for SASS to collect the data required for questions 6 and 10. However, information about some aspects of these questions would be provided by other suggested items. Teachers' perceptions of the effectiveness of the IPD programs would be known and certainly Item 1 on prevalence of IPD by type and Item 2 on program content and length would provide a good idea of what the public sector investment (whatever the amount may be) is purchasing. Question 9 will be covered in a later paper. Excluding these three questions, items have been suggested that provide data that relate directly to all the remaining questions except the last four. One of these, number 13, is addressed in part in Part II. Analysis of the data from the suggested items can also provide some information relevant to better ways to invest resources (question 11). Documentation of the range and quality of IPD in 1998-99 can also be the basis for suggesting the changes needed in IPD to meet the challenges of the reform movement (question 14). Finally, it should be possible to measure how the characteristics of IPD are changing over time (question 12), since care was

[14] Provides information related to introductory questions 3, 4, and 8.

taken to preserve the options in the 1993-1994 SASS when modifications of questions were suggested.

Including all 12 suggested items in SASS would greatly expand the section devoted to IPD. It is important, however, to remember the essential role of the teacher in the reform effort and the importance of providing teachers with the degree of professionalization needed in reform. We should not forget Sykes' assertion that the most serious unsolved problems for American education today are that teacher learning must be the heart of any effort to improve education and that conventional professional development is sorely inadequate (Sykes, 1996). Policy makers need information to address these problems. It follows that inservice professional development should be given the attention and the space in the 1998-1999 SASS that it deserves.

PART II

International Comparisons of IPD for Use of Computers and Advanced Telecommunications Equipment

Part II discusses the value of international comparisons and the value of state and nation comparisons generally and more specifically with respect to IPD. A number of international comparative studies that have been reported, are in process, or in the design stage will provide data on IPD and related topics such as school organization and environment.[15] Part II, however, addresses only one international study, the IEA Computers in Education Study (CompEd Study), which has extensive information on the professional development of teachers. It is discussed here to allow ample time for careful evaluation of the suggestion made in a later section to incorporate items from the CompEd Study in the 1998-1999 SASS. If implemented, this suggestion would have a large impact on SASS and should be considered in the early stages of the development of SASS. Part II therefore continues with a discussion of the need for data on IPD for use of computers and advanced telecommunications equipment, a specific proposal to include IPD items from the CompEd Study in SASS, and a description of the benefits of doing so.

Value of International Comparisons

The SASS measurements could be made more meaningful and the policy-relevance of the data could be enhanced by comparisons with data from other nations. A number of educators have

---

[15] The potential of all of these studies as a source of IPD-related items for the 1998-1999 SASS will be explored in a later paper. The paper will also provide analysis plans describing how data from these studies might be used in international comparisons or in state and nation comparisons of IPD--if the 1998-1999 SASS includes comparable items.

discussed the value of international comparative education information. Bradburn and Gilford (1990) consider that the most important use is to improve understanding of our own education system. In the absence of absolute standards for educational systems, comparative information can contribute to setting realistic standards and to monitoring the success of educational systems. They note the value of comparisons with other states or the nation, comparisons that have the advantage of comparing systems that are broadly similar. International comparisons, however, expand the range of comparison beyond the limits of national experience, and can be helpful not only for descriptive purposes, but also for monitoring. Plomp (1992) also considers that the most important reason for international comparisons is to improve understanding of educational systems and to provide policy makers and educators with information about the range of educational quality among various national systems. Cross and Stempel (1995) note that the value of international information is that it provides the opportunity to resolve the failings of our system in a uniquely American way. They urge concentrating on the reasons behind the decisions made by different countries concerning teacher training policies. Understanding their motives and expectations will help us decide what will and will not help us improve primary and secondary education in America.

Similarities in Cross National Issues

Most developed countries are facing similar education policy issues. Several countries are involved in reform efforts and many are faced with the issue of how to provide high quality education to a multi-cultural student body. These common concerns enhance the likelihood that we can learn from the actions taken by other countries. Some of the issues relate specifically to IPD. Most countries who are members of the OECD are deepening inservice teaching opportunities, as are Asian countries, e.g. Japan, Taiwan, and China (Darling-Hammond, 1996). There is concern about the limited opportunities for advancement and promotion in teaching. To address this issue, some countries, e.g., the United States and New Brunswick, Canada are taking action to create a career path that would lead toward highly accomplished practice over the course of a teaching career Korea has also recognized the need for a teaching-oriented career continuum (Darling-Hammond & Cobb, 1995). In Spain and Portugal inservice training is linked to career advancement (EURYDICE, 1995).

Another issue common to several countries stems from recognizing the importance of giving teachers greater professional authority and responsibility. The United States, Manitoba and Quebec in Canada, and the Republic of Korea have responded by giving teachers greater professional autonomy and greater voice in creating standards for preparation, licensure, and practice. Several European and Asian countries have recognized the significant role of continuous professional development as an important part of professionalism (EURYDICE, 1995), (Darling-Hammond & Cobb, 1995).

Value of State and Nation Comparisons

The policy relevance of the SASS data could be further enhanced by comparisons of state and nation data. SASS certainly has the potential to provide state data on IPD. Although the *SASS by State* publication (NCES, 1994) includes data about teacher characteristics and their preservice preparation, it does not include IPD data. During the current period of extensive reform and restructuring of the schools it is important for States to know about the involvement of the current teaching staff in the reform effort and how teachers are upgrading their expertise in their field and in pedagogy to meet the demands of reform. If the suggestions in this paper are implemented it would be possible to provide state data on the types and extent of IPD activities, the planning and coordination of IPD, school organization for teacher learning and other growth opportunities provided to teachers, support for IPD, and the school environment. It should also be possible for states to compare some characteristics of their professional development activities with those in other countries in a format like that used in the NCES publication *Education in States and Nations* (1993). Because of the central role that teachers play in student achievement, states that have demonstrated interest in educational achievement in other countries (frequently for economic reasons) would find uses for such information.

We turn now to ways of obtaining IPD data for state and nation comparisons and international comparisons for one topic: use of computers and advanced telecommunications equipment. We first consider why such data are important at this time.

Need for Data on IPD for Use of Computers and Advanced Telecommunications Equipment

This section describes the rapid growth in the use and types of use of computers in the schools, and the political support for introduction of advanced telecommunications equipment in the schools. Although IPD in the use of computers and other technologies is an important aspect of the successful introduction of the equipment in the schools, little is known about it. There are large gaps in the U.S. system of teacher training: teachers need more time to become conversant with computer technology, to plan lessons that integrate the computer in classroom activities, and to learn about computers. (Anderson, 1993). The CompEd study is of special interest because of its careful look at IPD for use of computers and because of its finding that U.S. teachers had less opportunity for such IPD than teachers in countries whose students were more proficient than U.S. students in the use of computers. This section concludes with a description of the IPD items in the CompEd Study.

The Use of Computers in Education

As we move into the age of cyberspace, there are many unanswered questions about the role that computers and other forms of technology can play in education. The percentage of elementary and secondary school students who use a computer at school is increasing rapidly:

in the nine years from 1984 to 1993 the percentage doubled, increasing from 28.5 percent to 59.0 percent (NCES, 1996). Fulton (1996) estimates that there were almost 5 million computers for instructional use in K-12 schools in 1995 and that the expenditures on technology reached $2.4 billion a year. Policy makers are justly concerned about the effectiveness of an investment of this size; they need additional data about computers, how they are used in the schools, and how they improve teaching and learning.

Changes in the Use of Computers in the Schools

Changes are rapid in this field. Recent new releases (Washington Post, 1996) illustrate two such changes. The first describes an experimental program in Germantown, Maryland using the computer as an on-line algebra instructor to replace a human teacher and a program in an Alexandria, Virginia school where fourth- and fifth-graders can choose to learn math from a computer or a teacher. The second announces the "Net Day" on March 9, 1996 when most of California's 13,000 public and private schools were scheduled to be wired for the Internet. Television on that day showed both the President and the Vice-President participating in the wiring! The National Information Infrastructure proposed by President Clinton includes a goal to connect all the nation's school classrooms (and also various other institutions and organizations) to the "Information Superhighway." It remains to be seen how teachers will use access to the Internet in their teaching.

Importance of IPD in the Use of Computers and Advanced Telecommunications Equipment

Teacher training is an important aspect of the introduction of computers in schools because most of today's teachers did not use computers when they were in elementary and secondary school and many of them did not receive computer education as part of their pre-service training. On the other hand, it is noted by Pelgrum and Plomp (1993) that "...teachers are ultimately the ones charged with the implementation of computers in educational practice and therefore 'education of the educators' or teacher training is an important aspect of the introduction of computers in schools." In fact, most of the benefits students will derive from using computers depend on the extent to which teachers integrate computers in their daily classroom activities. In 1992, however, less than half the schools in the United States reported having an introductory computer course available for teachers (Anderson, 1993, p.52). American teachers have less opportunity to take inservice computer courses than do teachers in Austria, Germany, and the Netherlands and, as might be expected, students in these countries are more computer-knowledgeable than American students (Anderson, 1993).

More recently, a survey to obtain baseline data on the status of advanced telecommunications in public elementary and secondary schools asked about barriers to the school's acquisition of advanced telecommunication capabilities. Nearly two-thirds of the surveyed schools cited lack of or inadequately trained staff and lack of teacher awareness regarding ways to integrate telecommunications equipment into curricula as moderate or major barriers (NCES, 1995).

IPD Items in the CompEd Study

The aim of the first stage of the study, with data collection in 1989, "...was to obtain information about the current status of the use of computers in education, more specifically within schools, ... for use in planning, implementation and evaluation in the field of computers in education" and to provide baseline information for measuring change in stage 2, with data collection in 1992. In addition to obtaining data to measure change, "...stage 2 involved assessing effects of school variables, and teacher and teaching variables on student outcomes in the domain of computer usage in schools (functional computer knowledge and skills)" (Pelgrum and Plomp, 1994). The survey included questionnaires for principals, school computer coordinators, and teachers of mathematics, science, mother tongue, and computer education in the 5th, 8th, and 11th grades.

The CompEd study includes a number of questions about teachers' professional development related to the implementation of computers in educational practice:

> A self-rating scale about the teacher's knowledge about and skill level in using computers
>
> Problems experienced in using computers. The list of problems includes three that are related to professional development: (1) teachers lack knowledge /skills about using computers for instructional purposes, (2) insufficient training opportunities for teachers, and (3) lack of interest/willingness of teachers in using computers
>
> Teacher's opinion of training needs
>
> Training received--provides a list of 25 topics covered in training. Information on teacher training is important because the CompEd study found that teachers tend to teach the topics covered in their own training in the lessons for their students.
>
> Support for training: availability of training at school; agencies that provide training support; availability of and type (full time, teacher, etc.) of computer coordinator in the school; time the computer coordinators spend helping teachers use computers (in-school support) or in training or study for themselves
>
> Percent of teachers using computers in mathematics, science, English, or computer education

The following section makes a proposal for using some of the CompEd IPD items (augmented by items related to advanced telecommunication) in the 1998-1999 SASS and discusses the benefits of doing so.

Proposal to Measure IPD for Computer Education in the 1998-1999 SASS

It is proposed that SASS include IPD questions from the CompEd study. This would require additional questions in the Principal Questionnaire, a new Computer Coordinator Questionnaire, and either additional questions on the Teacher Questionnaire or a separate questionnaire for a sample of teachers in the 5th, 8th, and 11th grades.

Although the CompEd study did not address the IPD aspects of teachers' use of advanced telecommunications equipment, it would be useful to include questions in the Teacher Questionnaire on how teachers use networking and other forms of advanced telecommunication, the training teachers receive to prepare them to use technologies as teaching tools and resources, and their awareness of the resources technology can offer them as professionals in carrying out many of the activities of their jobs (Fulton, 1996). Fulton develops this topic more extensively. A focus group to address ways to incorporate such questions in the survey without losing comparability with the data from the CompEd study could be useful.

The magnitude of the impact of this proposal on SASS is recognized. To compensate for the response burden it would create, it could replace the Teacher Demand and Shortage Questionnaire in the 1993-94 SASS. The most essential questions from that survey could be added to the Principal Questionnaire.

Benefits of Including IPD Items from CompEd in the 1998-1999 SASS

There are several reasons why it would be useful for the 1998-1999 SASS to include some of the CompEd stage 2 questions about inservice development of teachers. First, because many types of experts were involved in developing the IEA survey, it has led not only to interesting findings about the status of professional development for computer education, and identification of large differences between countries in IPD, but has also provided data useful to policy makers. For example, data from the CompEd study (a) provided the basis for recommendations concerning the training needs of teachers, (b) made it possible to identify the relative position of a country with respect to the availability of training and support for teachers, (c) provided a measure of the extent to which the computer was integrated in classroom teaching, and (d) made it possible to determine the relationship of teacher training to actual classroom use of computers. Second, including CompEd IPD questions in SASS 1998-1999it would make it possible to measure change in the amount and character of computer IPD in the United States from 1992 to 1998. Third, it would permit States to compare their IPD in 1998-1999 with that of other states and the nation. And fourth, although there would be six years difference in the data, States could compare IPD for their teachers with that of teachers in other nations at an earlier time.

In summary, the importance of this proposal is supported by the combination of rapid growth in the use of computers and advanced telecommunications technology in the schools, the essential role that teachers play in their effective use, the inadequate training in their use that

is available to teachers, and the national will for U.S. students to match the achievement of students in other countries in the use of these technologies. Our national leaders have already recognized and recently underscored the importance of such technologies in education.

References

Anderson, R. E. (Ed.). (1993). Computers in American Schools--1992: An Overview. Minneapolis: University of Minnesota

Bradburn, N. M. & Gilford, D. M. (Eds.). (1990). A Framework and Principles for International Comparative Studies in Education. Washington, D.C.: National Academy Press.

Consortium for Policy Research in Education. (1995a). Tracking Student Achievement in Science and Mathematics: The Promise of State Assessment Programs. CPRE Policy Briefs, RB-17-July. New Brunswick, N.J. Rutgers University, Consortium for Policy Research in Education.

Consortium for Policy Research in Education. (1995b). Reforming Science, Mathematics, and Technology Education: NSF's State Systemic Initiatives. CPRE Policy Briefs, RB-15-May. New Brunswick, N.J. Rutgers University, Consortium for Policy Research in Education.

Corcoran, T. B. (1995). Helping Teachers Teach Well: Transforming Professional Development. CPRE Policy Briefs, RB-16-June. New Brunswick, N.J. Rutgers University, Consortium for Policy Research in Education.

Darling-Hammond, L. (1996). The Current Status of Teaching and Teacher Development in the United States. Paper presented to the AERA Invitational Conference on Teacher Development and School Reform. Washington, D. C.

Darling-Hammond, L. (1995). The Condition of Teaching in America Today. Resources for Restructuring. Summer. New York: National Center for Restructuring Education, Schools, and Teaching; Teachers College, Columbia University.

Darling-Hammond, L. & Berry, B. (1988). The Evolution of Teacher Policy. Santa Monica, CA: Center for the Study of the Teaching Profession, RAND.

Darling-Hammond, L. & Cobb, V. L. (1995). The Teaching Profession and Teacher Education in the United States. In Darling-Hammond, L. & Cobb, V. L. (Eds.). Teacher Preparation and Professional Development in APEC Members, 221-40. Washington, D.C.: U.S. Department of Education.

EURYDICE, The Information Network in the European Union and the EFTA/EEA Countries. (1995). In-Service Training of Teachers in the European Union and the EFTA/EEA Countries. Brussels: Author.

Freezer, C . M. (1993). A Shared Vision: Policy Recommendations for Linking Teacher Education to School Reform. Denver: Education Commission of the States.

Fullan, M. G. (1991). The New Meaning of Educational Change. New York: Teachers College Press.

Fulton, K. (1996). Asking the Right Questions. Commissioned paper for NCES Forum on the Design of the 1998-99 Schools and Staffing Survey (SASS).

Gall, M. D. & Vojtek, R. O. (1994). Planning for Effective Staff Development: Six Research-Based Models. Eugene: University of Oregon, ERIC Clearing House on Education Management.

Gandal, M. (1995). Making Standards Matter: A Fifty-State Progress Report on Efforts to Raise Academic Standards. Washington, D.C.: American Federation of Teachers.

Green, J. (1987). The Next Wave: A Synopsis of Recent Education Reform Reports. Denver: Education Commission of the States.

Hawley, W. D. & Valli, L. (1996). The Essentials of Effective Professional Development: A New Consensus. Paper presented to the AERA Invitational Conference on Teacher Development and School Reform. Washington, D. C.

Lieberman, A. & Grolnick , M. (1996). Networks, Reform and The Professional Development of Teachers. Paper presented to the AERA Invitational Conference on Teacher Development and School Reform. Washington, D. C.

Little, J. W. (1996). Organizing Schools For Teacher Learning. Paper presented to the AERA Invitational Conference on Teacher Development and School Reform. Washington, D. C.

Little, J. W. (1993a). Teachers' Professional Development and Education Reform. CPRE Policy Briefs RB-11-October. New Brunswick: Rutgers, The State University of New Jersey.

Little, J. W.(1993b). Teachers' Professional Development in a Climate of Education Reform. Educational Evaluation and Policy Analysis 15(2):129-151.

Loucks-Horsley, S., Carlson M. O., Brink, L. H., Horwitz P.,

Marsh,D. D., Pratt, H., Roy, K. R., and Worth,K. (1989). Developing and Supporting Teachers for Elementary School Science Education. Andover, MA: The National Center for Improving Science Education.

Mandel, D. R. (1995). Teacher Education, Training and Staff Development: Implications for National Surveys. Paper Prepared for the Conference on Future Directions of NCES Data Collection: Some Possible Directions.

Mullens, J. E. (1995). Classroom Instructional Processes: A Review of Existing Measurement Approaches and Their Applicability for Teacher Followup Survey. Working Paper No. 95-15. Washington, D.C.: National Center for Education.

Mullens, J. E., Laguarda, K. G., Leighton, M. S., O'Brien, E. M., Wimberly, G. L., & Murphy, D. (1996). Student Learning, Teaching Quality, and Professional Development: Theoretical Linkages and Current Measurement. Draft for Comment. Washington, D.C.: Policy Studies Associates, Inc.

National Center for Education Statistics (1996). Student use of computers. Indicator of the Month, December 1995. NCES 96-792. Washington D.C.: U.S. Department of Education.

National Center for Education Statistics. (1995). Advanced Telecommunications in U.S. Public Schools, K-12. NCES 95-731. Washington D.C.: U.S. Department of Education.

National Center for Education Statistics. (1994). SASS by State, 1990-91 Schools and Staffing Survey: Selected State Results. NCES 94-343. Washington, D.C.: U.S. Department of Education.

National Center for Education Statistics. (1993). Education in States and Nations. Washington, D.C.: U.S. Department of Education.

National Commission on Excellence in Education (1983). A Nation at Risk: The Imperative for Educational Reform. (Report to the Nation and the Secretary of Education). Washington D.C.: U.S. Department of Education.

National Education Association (1992). Status of the American Public School Teacher, 1990-1991. Washington, D.C.: Author.

National Education Goals Panel. (1995a). The National Education Goals Report: Executive Summary: Improving Education Through Family-School-Coommunity Partnerships. Washington, D.C.: Author.

National Education Goals Panel. (1995b). Data Volume for the National Education Goals Report. Volume One: National Data. Washington, D.C.: Author.

National Education Goals Panel. (1995c). Report of the Goal 4 Resource Group: Teacher Education and Professional Development. Washington, D.C.: Author.

Odden, A. and Marsh, D. (1988). How Comprehensive Reform Legislation Can Improve Secondary Schools. Phi Delta Kappan, 69:593-598.

Pelgrum, W. J. & Plomp, T., Eds. (1994). The IEA Study of Computers in Education: Implementation of an Innovation in 21 Education Systems. New York: Pergamon Press.

Pelgrum, W. J. & Plomp, T., Eds. (1993). Schools, Teachers, Students and Computers: a Cross-National Perspective. Preliminary Report, IEA-Comped Study Stage 2. Enschede, The Netherlands: University of Twente.

Perron, M. (1991). Vers un continuum de formation des enseignants: elements d'analyse. Recherche et Formation (Paris, INRP) 10:137-152.

Plomp, T. (1992). Conceptualizing a comparative educational research framework. Prospects, XXII(3):278-288.

Porter, A. C. & Associates (1994). Reform of High School Mathematics and Science and Opportunity to Learn. CPRE Policy Briefs RB-13-September. Madison: University of Wisconsin--Madison.

Shulman, L. (1986). Those Who Understand: Knowledge Growth in Teaching. Educational Researcher 15(2):4-14.

Sparks, D. (1995). A Paradigmm Shift in Staff Development. The ERIC Review, 3(3), pp.2-4.

Sparks, D. and Loucks-Horsley, S. (1990). Models of Staff Development. In Houston, W., Haberman, M. and Sikula, S. (Eds.), Handbook of Research on Teacher Education (pp 264-89). Los Angeles: University of California.

Sykes, G. (1996). Reform of and as Professional Development. Phi Delta Kappan 77(7):465-467.

U.S. Department of Education (no date). Building Bridges: The Mission & Principles of Professional Development. Washington, D.C.: U.S. Department of Education. (pamphlet).

U.S. Department of Education (1994). Breaking the Tyranny of Time: Voices from the Goals 2000 Teacher Forum, November. Washington, D.C.: U.S. Department of Education

Watts, G.D., and S. Castle (1993). The Time Dilemma in School Restructuring. Phi Delta Kappan 75:306-310.

Appendix

Selected Items from the 1990-91 and 1993-94 Schools and Staffing Surveys

1990-91 SASS

28a. During your first year of teaching, did you participate in a formal teacher induction program, i.e., a program to help beginning teachers by assigning them to master or mentor teachers? Do not include student teaching.	110 1 ☐ Yes 2 ☐ No

39. At this school, how much actual influence do you think teachers have over school policy in each of the following areas?

Use the scale of 1–6, where 1 means "No influence" and 6 means "A great deal of influence."

	No influence → A great deal of influence					
a. Determining discipline policy	244 1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐
b. Determining the content of in-service programs	245 1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐
c. Setting policy on grouping students in classes by ability	246 1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐
d. Establishing curriculum	247 1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐

BEST COPY AVAILABLE

30. Since the end of last school year, in which of these activities related to teaching have you participated?

Mark (X) all that apply.

0545 1☐ SCHOOL DISTRICT sponsored workshops or in-service programs
0550 2☐ SCHOOL sponsored workshops or in-service programs
0555 3☐ University extension or adult education courses
0560 4☐ College courses in your subject field
0565 5☐ Professional growth activities sponsored by professional associations
0570 6☐ Committee to integrate academic skills into the vocational curriculum
0575 7☐ Other curriculum committee
0580 8☐ Committee on selecting textbooks or materials
0585 0☐ None of the above

31. Since the end of last school year, have you participated in any in-service or professional development programs which focused on the following topics?

a. Uses of educational technology for instruction (e.g., use of computer, satellite learning)

0590 1☐ Yes – How many hours did the program last? → 0595 1☐ 8 hours or less
2☐ 9–32 hours
3☐ More than 32 hours
2☐ No

b. Methods of teaching your subject field

0600 1☐ Yes – How many hours did the program last? → 0605 1☐ 8 hours or less
2☐ 9–32 hours
3☐ More than 32 hours
2☐ No

c. In-depth study in your subject field

0610 1☐ Yes – How many hours did the program last? → 0615 1☐ 8 hours or less
2☐ 9–32 hours
3☐ More than 32 hours
2☐ No

d. Student assessment (e.g., methods of testing, evaluation, performance assessment)

0620 1☐ Yes – How many hours did the program last? → 0625 1☐ 8 hours or less
2☐ 9–32 hours
3☐ More than 32 hours
2☐ No

e. Cooperative learning in the classroom

0630 1☐ Yes – How many hours did the program last? → 0635 1☐ 8 hours or less
2☐ 9–32 hours
3☐ More than 32 hours
2☐ No

BEST COPY AVAILABLE

NOTE: Answer this item only if you answered "Yes" to one or more of the training topics listed in item 31 on page 18.

32. Please give your opinion about the impact of the professional development programs, described in item 31, in which you have participated since last school year.

	Strongly agree	Agree	No opinion	Disagree	Strongly disagree
a. Provided information that was new to me.	0640 1☐	2☐	3☐	4☐	5☐
b. Changed my views on teaching.	0645 1☐	2☐	3☐	4☐	5☐
c. Caused me to change my teaching practices.	0650 1☐	2☐	3☐	4☐	5☐
d. Caused me to seek further information or training.	0655 1☐	2☐	3☐	4☐	5☐
e. Were generally a waste of my time.	0660 1☐	2☐	3☐	4☐	5☐

33. What types of support have you received during the current school year for in-service education or professional development in your MAIN teaching assignment field?

Mark (X) all that apply.

0665 1☐ Released time from teaching
0670 2☐ Scheduled time (i.e., time built into your schedule for professional development)
0675 3☐ Travel and/or per diem expenses
0680 4☐ Tuition and/or fees
0685 5☐ Professional growth credits
0690 0☐ None of the above

35a. During your first year of teaching, did you participate in a formal teacher induction program, i.e., a program to help beginning teachers by assigning them to master or mentor teachers?

Do not include student teaching.

0700 1☐ Yes
2☐ No

BEST COPY AVAILABLE

44. At this school, how much actual influence do you think teachers have over school policy in each of the following areas?

Use the scale of 0–5 where 0 means "No influence" and 5 means "A great deal of influence."

		No influence					A great deal of influence
a. Setting discipline policy	1015	0☐	1☐	2☐	3☐	4☐	5☐
b. Determining the content of in-service programs	1020	0☐	1☐	2☐	3☐	4☐	5☐
c. Hiring new full-time teachers	1025	0☐	1☐	2☐	3☐	4☐	5☐
d. Deciding how the school budget will be spent	1030	0☐	1☐	2☐	3☐	4☐	5☐
e. Evaluating teachers	1035	0☐	1☐	2☐	3☐	4☐	5☐
f. Establishing curriculum	1040	0☐	1☐	2☐	3☐	4☐	5☐

45. At this school, how much control do you feel you have IN YOUR CLASSROOM over each of the following areas of your planning and teaching?

Use the scale of 0–5 where 0 means "No control" and 5 means "Complete control."

		No control					Complete control
a. Selecting textbooks and other instructional materials	1045	0☐	1☐	2☐	3☐	4☐	5☐
b. Selecting content, topics, and skills to be taught	1050	0☐	1☐	2☐	3☐	4☐	5☐
c. Selecting teaching techniques	1055	0☐	1☐	2☐	3☐	4☐	5☐
d. Evaluating and grading students	1060	0☐	1☐	2☐	3☐	4☐	5☐
e. Disciplining students	1065	0☐	1☐	2☐	3☐	4☐	5☐
f. Determining the amount of homework to be assigned	1070	0☐	1☐	2☐	3☐	4☐	5☐

BEST COPY AVAILABLE

47. Do you agree or disagree with each of the following statements?

		Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree
a.	Teachers in this school are evaluated fairly.	1195 1☐	2☐	3☐	4☐
b.	The principal lets staff members know what is expected of them.	1200 1☐	2☐	3☐	4☐
c.	The school administration's behavior toward the staff is supportive and encouraging.	1205 1☐	2☐	3☐	4☐
d.	I am satisfied with my teaching salary.	1210 1☐	2☐	3☐	4☐
e.	The level of student misbehavior (e.g., noise, horseplay or fighting in the halls, cafeteria or student lounge) in this school interferes with my teaching.	1215 1☐	2☐	3☐	4☐
f.	Teachers participate in making most of the important educational decisions in this school.	1220 1☐	2☐	3☐	4☐
g.	I receive a great deal of support from parents for the work I do.	1225 1☐	2☐	3☐	4☐
h.	Necessary materials (e.g., textbooks, supplies, copy machine) are available as needed by the staff.	1230 1☐	2☐	3☐	4☐
i.	The principal does a poor job of getting resources for this school.	1235 1☐	2☐	3☐	4☐
j.	Routine duties and paperwork interfere with my job of teaching.	1240 1☐	2☐	3☐	4☐
k.	My principal enforces school rules for student conduct and backs me up when I need it.	1245 1☐	2☐	3☐	4☐
l.	The principal talks with me frequently about my instructional practices.	1250 1☐	2☐	3☐	4☐
m.	Rules for student behavior are consistently enforced by teachers in this school, even for students who are not in their classes.	1255 1☐	2☐	3☐	4☐
n.	Most of my colleagues share my beliefs and values about what the central mission of the school should be.	1260 1☐	2☐	3☐	4☐
o.	The principal knows what kind of school he/she wants and has communicated it to the staff.	1265 1☐	2☐	3☐	4☐
p.	There is a great deal of cooperative effort among the staff members.	1270 1☐	2☐	3☐	4☐
q.	In this school, staff members are recognized for a job well done.	1275 1☐	2☐	3☐	4☐
r.	I have to follow rules in this school that conflict with my best professional judgement.	1280 1☐	2☐	3☐	4☐

BEST COPY AVAILABLE

Listing of NCES Working Papers to Date

Please contact Ruth R. Harris at (202) 219-1831
if you are interested in any of the following papers

Number	Title	Contact
94-01 (July)	Schools and Staffing Survey (SASS) Papers Presented at Meetings of the American Statistical Association	Dan Kasprzyk
94-02 (July)	Generalized Variance Estimate for Schools and Staffing Survey (SASS)	Dan Kasprzyk
94-03 (July)	1991 Schools and Staffing Survey (SASS) Reinterview Response Variance Report	Dan Kasprzyk
94-04 (July)	The Accuracy of Teachers' Self-reports on their Postsecondary Education: Teacher Transcript Study, Schools and Staffing Survey	Dan Kasprzyk
94-05 (July)	Cost-of-Education Differentials Across the States	William Fowler
94-06 (July)	Six Papers on Teachers from the 1990-91 Schools and Staffing Survey and Other Related Surveys	Dan Kasprzyk
94-07 (Nov.)	Data Comparability and Public Policy: New Interest in Public Library Data Papers Presented at Meetings of the American Statistical Association	Carrol Kindel
95-01 (Jan.)	Schools and Staffing Survey: 1994 Papers Presented at the 1994 Meeting of the American Statistical Association	Dan Kasprzyk
95-02 (Jan.)	QED Estimates of the 1990-91 Schools and Staffing Survey: Deriving and Comparing QED School Estimates with CCD Estimates	Dan Kasprzyk
95-03 (Jan.)	Schools and Staffing Survey: 1990-91 SASS Cross-Questionnaire Analysis	Dan Kasprzyk
95-04 (Jan.)	National Education Longitudinal Study of 1988: Second Follow-up Questionnaire Content Areas and Research Issues	Jeffrey Owings
95-05 (Jan.)	National Education Longitudinal Study of 1988: Conducting Trend Analyses of NLS-72, HS&B, and NELS:88 Seniors	Jeffrey Owings

Listing of NCES Working Papers to Date--Continued

Number	Title	Contact
95-06 (Jan.)	National Education Longitudinal Study of 1988: Conducting Cross-Cohort Comparisons Using HS&B, NAEP, and NELS:88 Academic Transcript Data	Jeffrey Owings
95-07 (Jan.)	National Education Longitudinal Study of 1988: Conducting Trend Analyses HS&B and NELS:88 Sophomore Cohort Dropouts	Jeffrey Owings
95-08 (Feb.)	CCD Adjustment to the 1990-91 SASS: A Comparison of Estimates	Dan Kasprzyk
95-09 (Feb.)	The Results of the 1993 Teacher List Validation Study (TLVS)	Dan Kasprzyk
95-10 (Feb.)	The Results of the 1991-92 Teacher Follow-up Survey (TFS) Reinterview and Extensive Reconciliation	Dan Kasprzyk
95-11 (Mar.)	Measuring Instruction, Curriculum Content, and Instructional Resources: The Status of Recent Work	Sharon Bobbitt & John Ralph
95-12 (Mar.)	Rural Education Data User's Guide	Samuel Peng
95-13 (Mar.)	Assessing Students with Disabilities and Limited English Proficiency	James Houser
95-14 (Mar.)	Empirical Evaluation of Social, Psychological, & Educational Construct Variables Used in NCES Surveys	Samuel Peng
95-15 (Apr.)	Classroom Instructional Processes: A Review of Existing Measurement Approaches and Their Applicability for the Teacher Follow-up Survey	Sharon Bobbitt
95-16 (Apr.)	Intersurvey Consistency in NCES Private School Surveys	Steven Kaufman
95-17 (May)	Estimates of Expenditures for Private K-12 Schools	Stephen Broughman
95-18 (Nov.)	An Agenda for Research on Teachers and Schools: Revisiting NCES' Schools and Staffing Survey	Dan Kasprzyk
96-01 (Jan.)	Methodological Issues in the Study of Teachers' Careers: Critical Features of a Truly Longitudinal Study	Dan Kasprzyk

Listing of NCES Working Papers to Date--Continued

Number	Title	Contact
96-02 (Feb.)	Schools and Staffing Survey (SASS): 1995 Selected papers presented at the 1995 Meeting of the American Statistical Association	Dan Kasprzyk
96-03 (Feb.)	National Education Longitudinal Study of 1988 (NELS:88) Research Framework and Issues	Jeffrey Owings
96-04 (Feb.)	Census Mapping Project/School District Data Book	Tai Phan
96-05 (Feb.)	Cognitive Research on the Teacher Listing Form for the Schools and Staffing Survey	Dan Kasprzyk
96-06 (Mar.)	The Schools and Staffing Survey (SASS) for 1998-99: Design Recommendations to Inform Broad Education Policy	Dan Kasprzyk
96-07 (Mar.)	Should SASS Measure Instructional Processes and Teacher Effectiveness?	Dan Kasprzyk
96-08 (Apr.)	How Accurate are Teacher Judgments of Students' Academic Performance?	Jerry West
96-09 (Apr.)	Making Data Relevant for Policy Discussions: Redesigning the School Administrator Questionnaire for the 1998-99 SASS	Dan Kasprzyk
96-10 (Apr.)	1998-99 Schools and Staffing Survey: Issues Related to Survey Depth	Dan Kasprzyk
96-11 (June)	Towards an Organizational Database on America's Schools: A Proposal for the Future of SASS, with comments on School Reform, Governance, and Finance	Dan Kasprzyk
96-12 (June)	Predictors of Retention, Transfer, and Attrition of Special and General Education Teachers: Data from the 1989 Teacher Followup Survey	Dan Kasprzyk
96-13 (June)	Estimation of Response Bias in the NHES:95 Adult Education Survey	Steven Kaufman
96-14 (June)	The 1995 National Household Education Survey: Reinterview Results for the Adult Education Component	Steven Kaufman
96-15 (June)	Nested Structures: District-Level Data in the Schools and Staffing Survey	Dan Kasprzyk

Listing of NCES Working Papers to Date--Continued

Number	Title	Contact
96-16 (June)	Strategies for Collecting Finance Data from Private Schools	Stephen Broughman
96-17 (July)	National Postsecondary Student Aid Study: 1996 Field Test Methodology Report	Andrew G. Malizio
96-18 (Aug.)	Assessment of Social Competence, Adaptive Behaviors, and Approaches to Learning with Young Children	Jerry West
96-19 (Oct.)	Assessment and Analysis of School-Level Expenditures	William Fowler
96-20 (Oct.)	1991 National Household Education Survey (NHES:91) Questionnaires: Screener, Early Childhood Education, and Adult Education	Kathryn Chandler
96-21 (Oct.)	1993 National Household Education Survey (NHES:93) Questionnaires: Screener, School Readiness, and School Safety and Discipline	Kathryn Chandler
96-22 (Oct.)	1995 National Household Education Survey (NHES:95) Questionnaires: Screener, Early Childhood Program Participation, and Adult Education	Kathryn Chandler
96-23 (Oct.)	Linking Student Data to SASS: Why, When, How	Dan Kasprzyk
96-24 (Oct.)	National Assessments of Teacher Quality	Dan Kasprzyk
96-25 (Oct.)	Measures of Inservice Professional Development: Suggested Items for the 1998-1999 Schools and Staffing Survey	Dan Kasprzyk

DEPARTMENT OF EDUCATION
UNITED STATES OF AMERICA